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REPORT

OF THE

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FOR

THE YEAR 1889-90.

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PART II.

CHAPTER I.

CITY SCHOOL SYSTEMS.

Relative importance of city school systems (Table 1)—Comparison of city and country schools (Tables 2 and 3)—Comparative statistics for four years of all cities reported (Table 4)—Comparative statistics of enrollment, attendance, teachers, and accommodations in the city schools of the several States (Table 5)—Comparative statistics of property and expenditures of the same (Table 6)—Number and population, by States, of cities, etc., of over 4,000 inhabitants (Table 7)—Explanation of the same—Summary, by States, of school enrollment and attendance in the same cities (Table 8)—Similar summary of supervising officers, teachers, property, and expenditures (Table 9)—Similar summary of public high schools (Table 10)—Similar summary of public evening schools (Table 11).

The tables immediately following (*i. e.*, Nos. 1, 2, and 3) are designed to indicate the differences in the conditions of work that exist between the city schools and those of rural districts. The tables are self explanatory, and even a cursory examination will disclose the importance of the facts they develop. A few of these may be mentioned.

Though 32.39 per cent of the total population is in the cities, only 23.43 per cent of the enrollment is in city schools. This is apparently an indication that education is appreciated more highly in the country and that, though school attendance is surrounded by greater difficulties, country children more eagerly accept the advantages offered. The attendance is more regular in cities, as would naturally be expected, owing to the greater distance as a rule that must be traversed by country pupils and the better highways in the cities.

In the length of the school term rural schools are at a great disadvantage and the same is true of the average duration of each child's attendance. These may arise from the more meager financial support accorded to rural schools and from the exigencies of farm life which demand the services of the older children for a great part of each year.

The number of teachers is relatively very small in the cities, and the number of buildings required for city schools appears insignificant until their greater size and value are considered.

The slight difference that exists between the average cost per day of tuition for each pupil is significant and might readily serve as a text for a lesson on the meagerness of the pay of country school teachers, for there are nearly twice as many pupils to each teacher in the city schools.

On the other hand, may it not be that the greater proportionate enrollment in the country is at least partially due to the smaller number of pupils to a teacher and consequently the more intimate personal relation that exists between teacher and pupil?

Tables 5 and 6 are similar to others that have appeared in the Reports of the three years previous, and in Table 4 are reproduced for comparison some of the ratios shown in those tables. The data presented do not cover sufficient time to form the bases for any important general conclusions. The method of keeping school statistics and the manner of collecting them are yet far from perfect, and a variation of a few tenths of a per cent affords no ground for startling assertions of progress or the reverse. Such conclusions may be justly reached only after the appearance of marked differences or a series of changes in the same general direction covering a considerable number of years.

For several years past there has been a desire on the part of those interested in the preparation of these statistics to present a series of tables showing with

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reasonable accuracy the absolute totals of the several items for the entire Union. The first result of this was presented in the last Report, and similar tables are also included in this chapter as Nos. 8, 9, 10, and 11.

To prepare such tables it is first essential to perfect a list of cities of which all shall meet certain uniform conditions. This itself is very difficult even with the census reports at hand. Table 7, with the accompanying explanation, indicates some of the perplexities encountered. In the years other than census years the difficulties are of course multiplied, since dependence must be placed almost wholly upon local estimates.

Then, having the list of cities, the collection of complete statistics involves a task almost hopeless. Many cities fail to report every year, and in the returns of many more several of the most important items are omitted. As before explained, estimates were necessary to make good the deficiencies. The corrections and additions that the circumstances indicated having been made, the tables as they now stand are presumably fairly correct.

TABLE 1.—*Relative importance of city school systems; shown by comparison of the sum of results achieved by them, with similar data for the corresponding geographical divisions and for the United States.* (*See Tables 8 and 9 of this chapter, and Tables 1 to 15, chapter 1, Part 1.*)

	Total population. (Proportion in cities of over 4,000 inhabitants.)	Public school enrollment. (Proportion in cities.)	Average attendance. (Proportion in cities.)	Aggregate attendance. (Proportion in cities.)	Number of teachers. (Proportion in cities.)	Number of buildings. (Proportion in cities.)	Value of school property. (Proportion in cities.)	Cost of tuition. (Proportion in cities.)	Total expenditure. (Proportion in cities.)
1	2	3	4	5	6	7	8	9	10
	Per ct.	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*
United States	32.39	28.43	25.65	36.33	15.63	3.49	56.09	37.97	42.97
North Atlantic Division	55.14	46.49	48.85	56.89	30.16	8.30	70.00	58.07	61.60
South Atlantic Division	17.55	12.55	13.82	26.34	1.00	1.55	60.54	33.86	38.58
South Central Division	12.20	7.15	7.94	16.97	6.12	1.07	55.50	18.73	21.98
North Central Division	30.19	19.81	22.66	28.72	11.71	2.75	43.92	28.83	33.22
Western Division	34.46	28.27	30.15	40.74	17.18	4.46	56.53	35.72	41.29

TABLE 2.—*Comparison of city and country schools.*[1]—*Attendance, length of school term, etc.*

	Ratio of public school enrollment to total population.		Ratio of average attendance to total enrollment.		Average length of school term.		Average number of days' attendance of each pupil enrolled.		Average number of pupils to a teacher.	
	In city schools.	In rural schools.	In city schools.	In rural schools.	In city schools.	In rural schools.	In city schools.	In rural schools.	In city schools.	In rural schools.
1	2	3	4	5	6	7	8	9	10	11
					Days.	*Days.*				
United States	14.6	23.0	70.3	62.3	190.3	115.1	133.8	71.6	36.7	19.7
North Atlantic Division	15.1	21.3	68.7	62.6	194.0	140.4	133.4	87.9	36.0	16.3
South Atlantic Division	14.1	20.9	70.4	63.0	185.4	83.2	130.5	52.4	38.7	26.9
South Central Division	12.3	22.2	70.8	63.2	188.5	79.5	133.4	50.2	38.5	29.2
North Central Division	14.7	25.8	72.7	61.3	187.6	136.4	136.4	83.6	36.7	16.6
Western Division	14.0	18.7	68.8	62.8	182.5	114.6	125.6	72.0	38.9	18.7

[1] The data relating to country schools were obtained by subtracting the items in Tables 8 and 9 from the corresponding ones in Tables 1 to 15, chapter 1, Part 1.

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TABLE 3.—*Comparison of city and country schools*[1].—*Property and expenditures.*

	Value of school property per capita of total population.		Average value of a school building with its site and furniture.		Average cost per day of tuition for one pupil.		Average daily expenditure per pupil for all purposes.	
	In the cities.	In the country.	In the cities.	In the country.	In the cities.	In the country.	In the cities.	In the country.
1	2	3	4	5	6	7	8	9
					Cents.	*Cents.*	*Cents.*	*Cents.*
United States	$9.48	$3.55	$21,528	$694	8.76	8.16	15.17	11.48
North Atlantic Division	9.67	5.09	24,258	942	8.71	8.22	15.34	12.61
South Atlantic Division	5.57	0.77	373	177	7.81	5.45	11.48	6.54
South Central Division	5.87	0.65	348	159	7.49	6.64	10.79	7.82
North Central Division	10.20	5.62	25,773	909	8.72	8.67	15.41	12.47
Western Division	13.56	5.48	35,192	1,262	12.63	15.63	22.85	22.34

[1] The data relating to country schools represent the differences between corresponding items in Tables 8 and 9, and Tables 1 to 15, chapter 1, Part 1.

TABLE 4.—*Comparative statistics for four years of all cities from which information has been received.*

Year.	Ratio of private school enrollment to total public and private school enrollment.	Ratio of average attendance to total public-school enrollment.	Average number of days attendance of each pupil enrolled.	Average number of pupils in attendance to each teacher.	Average number of seats to each 100 pupils in attendance.	Average number of seats, or sittings, to a building.	Ratio of enrollment in high schools to total public-school enrollment.	Value of school property per capita of average attendance.	Cost of tuition per capita of average attendance.
1	2	3	4	5	6	7	8	9	10
	Per ct.	*Per ct.*					*Per ct.*		
1886-87	22.4	70.1	140.5	37.4	124.1	337.5	4.5	$85.00	$15.96
1887-88	21.0	70.1	133.7	37.0	128.6	324.2	4.5	80.54	16.29
1888-89	20.6	71.4	136.9	38.1	127.2	328.5	4.5	86.10	16.05
1889-90	20.7	70.3	133.8	36.7	129.6	345.2	4.5	92.10	16.67

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TABLE 5.—*Comparative statistics of enrollment, attendance, teachers, and accommodations in the schools of cities and villages of the several States, etc.*

State.	Ratio of total public and private school enrollment to total population.	Ratio of private school enrollment to total public and private school enrollment.	Ratio of public school enrollment to total population.	Ratio of average attendance to total enrollment.	Average number of days' attendance of each pupil enrolled.	Average number of pupils in attendance to each teacher.	Average number of teachers to each supervising officer.	Average number of seats for each 100 pupils in attendance.	Average number of seats or sittings to a building.	Ratio of high school enrollment to—		Ratio of graduates from high schools to total enrollment.	Proportion of males in high-school graduates.
										Total population.	Total enrollment.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*						*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
United States	18.5	20.7	14.6	70.3	133.4	36.7	19.6	129.6	345.2	0.67	4.54	0.55	31.5
North Atlantic Division	18.5	18.5	15.1	68.7	133.4	36.0	21.1	130.7	339.5	0.61	4.08	0.53	34.2
South Atlantic Division	17.2	18.0	14.1	70.4	130.5	38.7	20.8	121.7	373.3	0.55	3.87	0.54	31.0
South Central Division	16.7	26.0	12.3	70.8	133.4	38.5	16.0	131.1	348.4	0.51	4.13	0.47	22.5
North Central Division	19.3	23.7	14.7	72.7	136.4	36.7	18.3	130.4	352.6	0.81	5.53	0.61	29.1
Western Division	16.9	17.1	14.0	68.8	125.6	38.0	14.4	124.6	310.9	0.55	3.96	0.47	33.2
North Atlantic Division:													
Maine	19.3	14.7	16.5	71.9	127.6	28.2	21.8	139.6	99.0	1.33	8.04	1.07	33.7
New Hampshire	16.9	32.9	11.3	74.9	129.8	31.0	10.8	127.4	127.8	0.83	7.27	1.48	39.8
Vermont	20.0	35.8	12.8	73.0	130.8	31.4	40.0	139.3	149.9	1.35	10.53	1.28	39.5
Massachusetts	18.6	14.6	15.9	75.3	142.9	35.9	34.9	137.0	229.8	0.96	6.07	0.90	37.4
Rhode Island	19.9	15.4	16.9	60.4	111.1	32.1	19.3	140.1	197.3	0.71	4.19	0.47	40.5
Connecticut	19.5	17.7	16.1	60.8	136.0	33.1	.....	137.6	235.6	0.92	5.75	0.70	45.0
New York	18.0	21.0	14.2	68.2	135.2	35.9	16.6	128.4	618.6	0.47	3.29	0.36	28.9
New Jersey	18.8	22.8	14.5	65.2	127.2	37.3	14.6	126.5	425.7	0.49	3.37	0.41	32.7
Pennsylvania	18.8	15.7	15.9	66.4	128.8	38.0	27.4	127.4	365.8	0.52	3.29	0.47	32.5
South Atlantic Division:													
Delaware	.....	.....	15.0	68.0	122.6	36.2	.....	127.1	292.1	0.57	3.82	0.35	32.4
Maryland	18.4	19.8	14.7	63.2	121.0	34.1	108.7	138.5	508.7	0.28	1.93	0.27	21.5
District of Columbia	17.4	7.8	16.0	76.4	127.8	37.8	33.9	110.6	324.5	0.75	4.79	0.89	40.9
Virginia	17.2	22.4	13.3	73.1	135.8	43.6	19.2	112.2	340.2	0.72	5.41	0.50	23.5
West Virginia	20.0	11.1	17.8	70.4	132.9	37.4	17.3	130.7	305.3	1.12	6.28	0.70	22.9
North Carolina	.....	.....	14.7	61.3	103.0	38.3	10.4	125.8	322.5	0.68	4.60	0.94	36.6
South Carolina	16.3	30.3	11.4	78.3	145.8	48.2	8.2	106.5	471.4	0.39	3.14	0.33	6.3
Georgia	15.1	18.8	12.3	78.7	149.5	43.4	19.4	112.3	378.4	0.57	4.05	0.68	34.6
Florida	.....	.....	9.4	77.0	128.2	50.4	20.5	115.8	191.3	0.31	3.34	0.65	23.9
South Central Division:													
Kentucky	.....	.....	14.1	71.6	148.2	40.5	18.9	118.2	431.7	0.65	4.62	0.47	28.1

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Tennessee	14.3	14.6	12.2	71.3	129.1	44.9	8.3	102.5	300.9	0.41	3.38	0.48	24.8
Alabama			9.5						304.9	0.55	5.96	0.55	13.5
Mississippi	19.3	24.6	14.6	71.0	125.9	38.7	27.4	200.6	482.9	0.41	2.30	0.59	20.4
Louisiana			8.6	71.8	134.2	35.3				0.28	3.26	0.48	18.3
Texas			13.9	65.3	118.2	36.0	15.8	182.1	238.8	0.60	4.32	0.37	16.3
Arkansas	19.6	18.3	16.0	66.1	117.6	33.5	38.2			0.69	4.30	0.61	32.3
Oklahoma													
North Central Division:													
Ohio	19.6	22.6	15.2	76.0	143.2	38.9	20.8	128.0	384.3	0.87	5.73	0.69	28.9
Indiana	22.2	20.4	17.7	68.2	135.0	37.5	20.4	127.6	327.2	1.08	6.18	0.63	26.6
Illinois	18.8	23.2	13.5	73.9	149.2	36.1	14.9	123.4	438.0	0.62	4.56	0.53	24.6
Michigan	18.9	25.6	14.1	77.9	151.4	34.9	20.7	132.7	298.4	1.14	8.12	0.77	30.4
Wisconsin	21.3	23.8	15.2	69.7	131.1	37.5	17.1	135.2	306.1	0.81	5.81	0.48	34.6
Minnesota	15.5	18.5	12.6	69.4	134.3	26.5	13.0	153.1	357.1	0.69	5.50	0.53	31.8
Iowa	20.5	15.5	17.3	70.7	139.9	33.3	18.0	137.8	287.1	1.20	6.93	0.64	33.3
Missouri	19.3	25.6	14.4	68.7	124.2	33.9	22.6	133.9	419.0	0.62	4.31	0.50	21.8
North Dakota			18.9	60.8		32.1	19.0	155.2	270.7	1.45	7.67	0.70	21.4
South Dakota	16.6	14.8	14.2	62.4	102.3	26.5	17.0	152.9	196.4	0.79	5.55	0.21	0.
Nebraska	12.5	10.1	11.3	67.5	125.4	36.2	19.2	124.5	223.9	0.50	4.45	0.63	34.7
Kansas	23.3	14.3	19.9	76.3	124.1	42.6	34.9	128.1	286.2	1.03	5.15	0.63	30.7
Western Division:													
Montana	18.5	16.2	15.5	61.2	116.0	34.6	16.7	140.0	141.3	0.53	3.84	0.34	53.3
Wyoming													
Colorado			12.7	62.0	113.0	35.4	13.9	122.6	320.0	0.61	4.79	0.44	26.6
New Mexico	15.2	57.6	6.4	75.9	113.8	33.5		149.0	150.9	0	0	0	
Arizona										0.31		0	
Utah	15.3	23.5	11.7	50.5	98.7	40.0	20.2	130.0	136.8	0	0	0	
Nevada	22.8	25.7	16.9	71.8	142.3	47.1	7.3	149.6	337.5	0.81	4.78	1.11	37.5
Idaho													
Washington			11.3				21.1			0.42	3.72	0.31	35.7
Oregon			13.0	68.9	126.2	41.9	13.4	145.7	491.7	0.47	3.59	0.45	18.2
California	18.2	15.2	15.4	74.3	131.4	40.2	18.7	117.2	335.6	0.85	4.19	0.56	35.1

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TABLE 6.—*Comparative statistics of property and expenditures of the city and village school systems of the several States.*

State.	Value of school property per capita of—		Cost of tuition (*i. e.*, supervision and teaching) per capita of—		Average cost per day of tuition for one pupil.	Total expenditure per capita of total population.	Average daily expenditure per pupil for all purposes.
	Total population.	Average attendance of pupils.	Total population.	Average attendance of pupils.			
1	2	3	4	5	6	7	8
					Cents.		*Cents.*
United States	$9.48	$92.10	$1.72	$16.67	8.76	$2.97	15.17
North Atlantic Division	9.07	93.32	1.75	16.89	8.71	3.08	15.84
South Atlantic Division	5.57	56.15	1.44	14.49	7.81	2.11	11.48
South Central Division	5.87	67.40	1.23	14.12	7.49	1.77	10.79
North Central Division	10.20	95.34	1.75	16.85	8.72	3.09	15.41
Western Division	13.56	141.03	2.22	23.06	12.63	4.01	22.85
North Atlantic Division:							
Maine	8.73	73.66	1.72	14.49	8.17	2.40	11.43
New Hampshire	10.02	117.68	1.30	15.29	8.82	2.33	15.80
Vermont	9.15	97.70	1.47	15.50	8.68	2.23	13.27
Massachusetts	14.76	123.53	2.34	19.55	10.30	3.87	17.06
Rhode Island	9.53	93.44	1.73	16.92	9.20	2.89	15.41
Connecticut	11.22	99.98	1.95	17.32	8.89	3.21	14.71
New York	8.84	91.04	1.76	18.09	9.13	3.30	17.14
New Jersey	6.28	66.57	1.50	15.93	8.16	2.27	12.30
Pennsylvania	8.56	81.20	1.43	13.57	7.00	2.58	12.61
South Atlantic Division:							
Delaware	7.90	77.55	1.26	12.34	6.33	2.18	10.99
Maryland	5.79	62.17	1.59	17.03	8.90	2.27	12.74
District of Columbia			2.22	18.12	10.19	3.64	18.07
Virginia	3.51	36.01	1.05	10.76	5.83	1.28	7.13
West Virginia	8.62	68.73	1.78	14.17	7.50	2.84	11.99
North Carolina	2.78	30.93	1.03	11.40	6.79	1.24	8.23
South Carolina	2.68	30.09	1.09	12.21	6.56	1.35	8.13
Georgia	5.39	55.80	1.19	12.28	6.46	1.54	8.40
Florida	1.50	20.80	0.78	10.83	6.51	0.99	8.28
South Central Division:							
Kentucky	6.42	63.47	1.45	14.32	6.92	1.90	7.24
Tennessee	4.34	49.97	1.07	12.36	6.85	1.84	11.69
Alabama	4.18		0.97				
Mississippi	4.56	44.08	1.18	11.44	6.46	1.42	7.74
Louisiana						0.98	8.52
Texas	7.25	80.14	1.52	16.83	9.30	2.18	13.27
Arkansas							
North Central Division:							
Ohio	11.70	101.30	1.85	16.06	8.53	3.21	14.75
Indiana	11.54	95.84	1.70	14.13	7.74	2.69	12.26
Illinois	8.57	85.00	1.82	18.22	9.47	3.13	16.32
Michigan	9.36	85.38	1.62	14.81	7.62	3.08	14.48
Wisconsin	8.22	77.80	1.57	14.84	7.88	2.41	12.13
Minnesota	14.39	164.53	2.13	24.37	12.60	4.42	26.10
Iowa	11.28	92.33	1.93	15.81	8.60	3.32	14.79
Missouri	8.32	84.34	1.50	15.23	8.41	2.62	14.09
North Dakota	27.25	237.39	2.71	23.60		4.88	
South Dakota	34.39	389.27	1.99	22.57	13.77	3.20	22.07
Nebraska	10.29	135.27	1.35	17.78	9.57	2.67	18.85
Kansas	12.28	80.34	1.87	12.24	7.01	3.96	14.83
Western Division:							
Montana	16.29	172.67	2.33	24.67	13.00	3.15	17.58
Wyoming							
Colorado	17.53	221.74	1.77	22.42	12.29	5.05	35.05
New Mexico	1.94	39.74	0.36	7.29	4.86	0.36	4.86
Arizona							
Utah	6.61	111.82	0.95	16.15	8.28	2.07	17.96
Nevada	3.53	28.95	2.08	17.08	8.63	3.53	14.62
Idaho							
Washington							
Oregon	10.10	112.73	2.02	22.55	12.30	2.96	18.02
California	14.95	130.23	2.76	24.08	13.62	4.20	20.72

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TABLE 7.—*Number and population, by States, of cities, etc., containing over 4,000 inhabitants.*

State.	"Cities and villages" in list used by the Bureau of Education.[a]		"Places" in United States Census Bulletin No. 165.	
	Number.	Population.	Number.	Population.
1	2	3	4	5
United States	817	20,282,923	905	20,799,296
North Atlantic Division	310	9,594,553	400	10,125,726
South Atlantic Division	61	1,554,190	61	1,554,190
South Central Division	71	1,339,232	71	1,339,232
North Central Division	325	6,752,289	324	6,744,489
Western Division	50	1,042,659	49	1,035,659
North Atlantic Division:				
Maine	15	170,000	26	226,268
New Hampshire	7	116,604	12	144,184
Vermont	5	40,213	10	74,635
Massachusetts	54	1,615,282	102	1,859,300
Rhode Island	9	237,521	17	310,335
Connecticut	23	396,804	37	499,475
New York	85	3,811,477	84	3,805,477
New Jersey	30	837,445	30	837,445
Pennsylvania	82	2,368,607	82	2,368,607
South Atlantic Division:				
Delaware	2	65,441	2	65,441
Maryland	6	477,275	6	477,275
District of Columbia	1	230,392	1	230,392
Virginia	14	248,704	14	248,704
West Virginia	5	67,006	5	67,006
North Carolina	12	97,059	12	97,059
South Carolina	4	84,459	4	84,459
Georgia	12	226,549	12	226,549
Florida	5	57,305	5	57,305
South Central Division:				
Kentucky	16	325,609	16	325,609
Tennessee	8	219,792	8	219,792
Alabama	10	123,917	10	123,917
Mississippi	6	51,235	6	51,235
Louisiana	3	264,496	3	264,496
Texas	22	289,620	22	289,620
Arkansas	5	60,412	5	60,412
Oklahoma	1	4,151	1	4,151
North Central Division:				
Ohio	70	1,387,884	70	1,387,884
Indiana	37	507,133	37	507,133
Illinois	48	1,613,268	47	1,605,468
Michigan	39	652,531	39	652,531
Wisconsin	35	522,826	35	522,826
Minnesota	12	405,091	12	405,091
Iowa	23	334,163	23	334,163
Missouri	29	811,568	29	811,568
North Dakota	2	10,643	2	10,643
South Dakota	1	10,177	1	10,177
Nebraska	10	273,331	10	273,331
Kansas	19	223,674	19	223,674
Western Division:				
Montana	2	24,557	2	24,557
Wyoming	2	18,078	2	18,078
Colorado	7	168,587	7	168,587
New Mexico	1	6,185	1	6,185
Arizona	1	5,150	1	5,150
Utah	4	69,456	4	69,456
Nevada	1	8,511	1	8,511
Idaho	0	0	0	0
Washington	8	120,685	8	120,865
Oregon	5	75,230	4	68,230
California	19	546,040	19	546,040

[a] For the names of these cities and villages and their population see the tables of city school statistics in Part III, and also the list of cities annexed thereto from which no data are available.

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EXPLANATION OF THE DIFFERENCES IN THE FOREGOING TABLE.

The difference between the list of "places" of over 4,000 inhabitants presented in Bulletin No. 165 of the United States Census Office and the list of "cities and villages" used in the compilation of the tables of this chapter may be explained as follows:

First. The population of the cities of Owego, N. Y., Evanston, Ill., and Salem, Oregon, was not separately reported by the enumerators of their respective localities. Consequently these cities were not included in the list of places in the census bulletin mentioned. All three cities are undoubtedly of the population requisite for representation in these tables; their school statistics are reported in due form, and no reason is apparent why they should not be inserted. The population assigned to them is estimated, the estimates being based principally upon the population in 1880 and the rate of increase of the several townships of which they are parts.

Second. The differences which appear in the figures for the six New England States require more extended notice, since the school data here presented will be used in comparison with similar items in future years, and it is important that persons so using them shall be in no doubt as to what the figures represent.

In New England, as it is well-known, the methods of local government are peculiar. Counties exist, but for judicial purposes only; in nearly all other matters what is there known as the "town system" prevails. The entire territory is divided into towns, which correspond in a measure to the western townships, but with the important difference that the New England towns are independent of the county in all matters of local concern. Villages in the towns are not recognized in the system and do not even have their boundaries defined. A "town" is made a city by simply changing the plan of government from a pure democracy to a representative form. This may be done when the people desire the change and the legislature sanctions it, after certain conditions have been reached, as, in Massachusetts for example, when the population is as great as 12,000.

The average area of the towns in Massachusetts is approximately 23 square miles; in Rhode Island, 30; in Connecticut, 29; in Maine, 60; in Vermont and New Hampshire, 38.

It is plain, therefore, that there are many towns in which a population of several thousand is so scattered over a large territory as to deprive them of every aspect of urban communities. Then, too, some of the "cities" consist of several distinct villages, between which original forests or agricultural lands still remain, although in most cases the incorporated cities are uniformly and thickly settled, and do not differ materially from cities in other parts of the country. But there are no boundaries recognized excepting those of the counties and towns or cities, organized as before explained; and the custom prevalent in that section of never considering the village apart from the town in official matters, evidently had its effect upon the census officials, for with a few exceptions they made no mention of the villages in their figures of population.

There is great difficulty, therefore, in making from such data a tabular statement of urban population in New England which will substantially correspond with the conditions elsewhere. Only two methods of dealing with the problem seem possible: First, disregard the great territorial extent of the "towns" and place them in the same category with the cities and villages of other sections; second, investigate the character of the population of the several towns, considering each one separately, and from the best data available make as close an estimate as possible of the urban population.

The first method was adopted by the census authorities in this city. It has the advantage of displaying no figures except those obtained by an actual count of something; but its disadvantage is obvious, since it makes the urban population appear to be far greater than it is in fact.

This method is particularly unsatisfactory in the matter of school statistics. "City school systems" are essentially those of dense settlements. The schools in rural, or sparsely settled, districts form a class entirely different in organization, in methods, and, as a rule, in results. It becomes important, therefore, to separate them as far as possible. As this could not be done under the classification of the Census Office the second method of obtaining the list of "cities" was adopted, although it involved the use of estimates in many cases.

The following may be given as the principal means by which the fitness or unfitness for these tables of individual localities was determined:

First. When a town was shown to contain more or less rural or scattered population, and a single village or borough whose population was exactly stated, or could be approximately determined from the school census or otherwise, the

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town was disregarded and the village or borough was considered with sole reference to its own population. Cases of this kind arose principally in Connecticut and Vermont.

Second. When the only school statistics to be had were for the town as a whole, and it appeared that the town was composed wholly of a city or large village with its environs or "suburbs," as in the case of New Britain, Conn., the population of the town was used in preference to that of the city alone. This was necessary to make the figures of population correspond in area with the school data, and is in accordance with the general practice of including more or less of contiguous territory in the corporate limits of a city.

Third. When a town contains several distinct villages with separate interests, none of which had as many as 4,000 inhabitants, all were discarded, though the population of the entire town may have been a great deal more than the minimum limit. But when one of the villages evidently contained the required population that village was included in the list, with an estimate as accurate as may be of its population. Warwick, R. I., is an instance of the first class, and Lincoln, R. I., containing Central Falls, of the second class.

Fourth. When nothing definite could be determined concerning the villages in a town the population of the town as compared with its area as shown by the maps was taken as an indication of the density of its population, and consequently of the fitness of the town for use in the tables. But in all such cases the organization of the schools shown by the reports of the school committees was considered, for in New England small schools almost invariably indicate sparse population. In Massachusetts, and in some instances in other States, it was necessary to accept or discard each town as a whole according to these guides, which, it must be admitted, were by no means satisfactory.

It is to be remembered that the list as it stands is not claimed to be a perfect one, and persons with an intimate knowledge of the several localities may detect flaws in the conclusions reached regarding them; if so, any suggestion in relation thereto will be gladly accepted.

The following shows in detail the instances of difference between the Census Office tables and those of this chapter so far as they relate to New England:

CONNECTICUT.

	Population.			Population.	
	Census Bulletin No. 165.	List of Bureau of Education.		Census Bulletin No. 165.	List of Bureau of Education.
Ansonia town	10,342	(a)	Orange town	4,537	(a)
Ansonia village	(a)	b 5,000	Plainfield town	4,582	(a)
Branford town	4,460	(a)	Portland town	4,687	(a)
Derby town	5,969	(a)	Putnam town	6,512	(a)
Birmingham borough	(a)	4,413	Southington town	5,501	(a)
East Hartford town	4,455	(a)	Stafford town	4,535	(a)
Enfield town	7,199	(a)	Stonington town	7,184	(a)
Thompsonville village	(a)	b 4,000	Thompson	5,580	(a)
Groton town	5,539	(a)	Torrington town	6,048	(a)
Huntington town	4,006	(a)	Torrington borough	(a)	4,283
Killingly town	7,027	(a)	Vernon town	8,808	(a)
Naugatuck town	6,218	(a)	Rockville city	(a)	7,772
New Britain town	(a)	19,007	Wallingford town	6,584	(a)
New Britain city	16,519	(a)	Wallingford borough	(a)	4,230
Norwalk town	17,747	(a)	Winchester town	6,183	(a)
South Norwalk village	(a)	b 4,000	Winsted borough	(a)	4,846

a Omitted. b Estimated.

MAINE.

The following appear in Census Bulletin No. 165, but are excluded from the list of this Office in accordance with the plan indicated above:

Town.	Population.	Town.	Population.
Brunswick	6,012	Houlton	4,015
Camden	4,621	Oldtown	5,312
Cape Elizabeth	5,459	Sanford	4,201
Caribou	4,087	Skowhegan	5,018
Deering	5,353	Westbrook	6,632
Eastport	4,908		

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MASSACHUSETTS.

The following appear in Census Bulletin No. 165, but are excluded from the list of this Bureau in accordance with the plan indicated above:

Town.	Population.	Town.	Population.
Abington	4,260	Millbury	4,428
Amherst	4,512	Milton	4,278
Andover	6,142	Montague	6,296
Arlington	5,629	North Attleboro	6,727
Athol	6,319	Northbridge	4,603
Barnstable	4,023	Orange	4,568
Blackstone	6,138	Palmer	6,520
Braintree	4,848	Provincetown	4,642
Bridgewater	4,249	Reading	4,088
Canton	4,538	Revere	5,668
Concord	4,427	Rockland	5,213
Easthampton	4,395	Rockport	4,067
Easton	4,493	South Hadley	4,261
Franklin	4,831	Stoughton	4,852
Grafton	5,002	Wakefield	6,982
Great Barrington	4,612	Ware	7,339
Greenfield	5,252	Warren	4,681
Hingham	4,564	Webster	7,031
Hopkinton	4,068	Westboro	5,195
Hudson	4,670	West Springfield	5,077
Ipswich	4,439	Whitman	4,441
Leominster	7,269	Williamstown	4,221
Methuen	4,814	Winchendon	4,390
Middleboro	6,065	Winchester	4,861

NEW HAMPSHIRE.

	Population.			Population.	
	Census bulletin No. 165.	List of Bureau of Education.		Census bulletin No. 165.	List of Bureau of Education.
Claremont town	5,565	(a)	Rochester town	7,396	(a)
Exeter town	4,284	(a)	Rochester village	(a)	b 6,100
Franklin town	4,085	(a)	Somersworth town	6,207	(a)
Laconia town	6,143	(a)			

a Omitted. b Estimated.

RHODE ISLAND.

	Population.			Population.	
	Census bulletin No. 165.	List of Bureau of Education.		Census bulletin No. 165.	List of Bureau of Education.
Burrillville town	5,492	(a)	Lincoln town	20,355	(a)
Coventry town	5,068	(a)	Central Falls village	(a)	b 8,700
Cranston town	8,099	(a)	North Kingstown	4,193	(a)
Cumberland town	8,090	(a)	South Kingstown	6,231	(a)
Johnston town	9,778	(a)	Warren	4,489	(a)
Olneyville village	(a)	b 8,042	Warwick	17,761	(a)

a Omitted. b Estimated.

VERMONT.

	Population.		Remarks.
	Census bulletin No. 165.	List of Bureau of Education.	
Barre town	6,812	(a)	
Barre village	(a)	4,146	
Bennington town	6,391	(a)	Bennington village has 3,971 inhabitants.
Brattleboro town	6,862	(a)	
Brattleboro village	(a)	5,467	
Colchester town	5,143	(a)	Winooski village has 3,659 inhabitants.
Montpelier town	4,160	(a)	Montpelier village has 3,617 inhabitants.
Rockingham town	4,579	(a)	Bellows Falls village has 3,092 inhabitants.
Rutland town	11,760	(a)	
Rutland village	(a)	8,239	
St. Johnsbury town	6,567	(a)	St. Johnsbury village has 3,857 inhabitants.

a Omitted.

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TABLE 8.—*Summary*[1] *by States of school enrollment and attendance in cities and villages containing over 4,000 inhabitants.*

State.	Enrollment in public day schools.	Aggregate number of days' attendance of all pupils.	Average attendance.	Enrollment in private and parochial schools. (Estimated.)
1	2	3	4	5
United States	2,969,938	397,370,327.4	2,068,071.8	773,709
North Atlantic Division	1,446,635	192,965,023.6	994,432.2	329,265
South Atlantic Division	219,166	28,595,166.6	154,257.1	48,264
South Central Division	164,896	21,997,437.8	116,664.8	57,979
North Central Division	993,509	135,506,309	722,411.2	308,062
Western Division	145,732	18,306,390.4	100,307.0	30,139
North Atlantic Division:				
Maine	28,120	3,586,990	20,215	4,847
New Hampshire	13,252	1,720,247	9,927	6,493
Vermont	5,158	674,742	3,766.1	2,882
Massachusetts	256,534	36,642,795.3	193,015.2	43,946
Rhode Island	40,067	4,452,246.6	24,220.1	7,271
Connecticut	63,777	8,669,858.7	44,509.3	13,734
New York	542,525	73,361,119	370,102.4	144,490
New Jersey	121,315	15,441,590.5	79,066.1	35,735
Pennsylvania	375,887	48,415,434.5	249,611	69,957
South Atlantic Division:				
Delaware	9,801	1,298,993	6,666	
Maryland	70,294	8,503,614	44,450	17,357
District of Columbia	36,906	5,012,255	28,184	3,119
Virginia	33,188	4,478,353.6	24,263.1	9,585
West Virginia	11,943	1,586,616	8,406	1,485
North Carolina	14,252	1,467,741	8,739	
South Carolina	9,610	1,401,477	7,523	4,17
Georgia	27,812	4,159,132	21,897	6,42
Florida	5,360	686,985	4,129	
South Central Division:				
Kentucky	45,879	6,801,567.8	32,853	
Tennessee	26,759	3,454,424	19,068.8	4,589
Alabama	11,731			
Mississippi	7,458	938,787	5,295	2,436
Louisiana	22,759	3,055,072	16,349	
Texas	40,127	4,742,710	26,212.1	
Arkansas	9,672	1,137,350	6,394	2,165
Oklahoma				
North Central Division:				
Ohio	210,910	30,188,440.2	160,316	61,719
Indiana	89,546	11,136,848.2	61,060	22,960
Illinois	217,674	30,940,411.5	160,332.8	85,342
Michigan	91,825	13,896,263.1	71,528.7	31,536
Wisconsin	79,294	10,396,957.5	56,220.7	32,062
Minnesota	51,104	6,857,721	35,445.1	11,841
Iowa	57,755	7,501,616.6	40,333.2	10,525
Missouri	116,605	14,478,824.5	80,075	40,163
North Dakota	2,007		1,221	
South Dakota	1,441	147,483.5	899.1	250
Nebraska	30,812	3,865,759.9	20,787.1	3,445
Kansas	44,536	5,971,783	34,192.5	7,461
Western Division:				
Montana	3,794	440,120	2,321.6	737
Wyoming				
Colorado	21,519	2,431,256.8	13,335.4	
New Mexico	398	45,300	302	540
Arizona				
Utah	8,120	801,212	4,105	2,500
Nevada	1,442	205,246.8	1,036.6	500
Idaho				
Washington	13,642			
Oregon	9,789	1,236,096	6,747.3	
California	84,422	11,094,940.8	62,708	15,187

[1] In the preparation of these summaries omissions and deficiencies in the returns of individual cities were supplied from the best sources available. If no accurate information could be had in any particular case, an estimate based upon the ratios developed in the other cities of the same State was used unless it appeared that the conditions were essentially different in the city for which precise data were lacking.

Blanks in the tables indicate that the number of cities which reported the item was not sufficient to justify an assumption of approximate correctness in an estimate for the deficiency.

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TABLE 9.—*Summary*[1] *by States of supervising officers, teachers, property, and expenditures of school systems of cities and villages containing over 4,000 inhabitants.*

State.	Number of supervising officers.	Number of teachers.			Number of buildings.	Number of seats or sittings for study.	Value of all public property used for school purposes.	Expenditure for supervising and teaching.	Expenditure for all purposes except bonds and loans
		Male.	Female.	Total.					
1	2	3	4	5	6	7	8	9	10
United States	2,900	4,653	42,229	56,882	7,842	2,706,716	$192,359,704	$34,807,680	$60,274,732
North Atlantic Division.	1,309	1,944	25,648	27,592	3,826	1,299,275	92,814,028	16,800,601	29,566,176
South Atlantic Division.	149	503	3,482	3,985	503	187,786	8,664,111	2,234,924	3,252,304
South Central Division	189	422	2,608	3,030	439	152,980	7,866,369	1,646,951	2,372,501
North Central Division	1,074	1,564	18,133	19,697	2,672	941,722	68,867,767	11,812,100	20,871,712
Western Division	179	220	2,358	2,578	402	124,953	14,147,429	2,313,104	4,182,039
North Atlantic Division:									
Maine	29	60	658	718	285	28,218	1,488,850	293,000	409,779
New Hampshire	27	22	270	292	99	12,650	1,168,328	151,721	271,784
Vermont	3	8	112	120	35	5,248	367,933	58,550	89,558
Massachusetts	154	503	4,875	5,378	1,103	264,525	23,844,069	3,774,239	6,253,162
Rhode Island	39	61	693	754	172	33,938	2,263,371	409,860	696,195
Connecticut	.....	98	1,245	1,343	260	61,251	4,450,430	770,796	1,275,213
New York	622	589	9,713	10,302	768	475,153	33,697,620	6,695,505	12,576,381
New Jersey	145	92	2,027	2,119	235	100,447	5,263,493	1,259,689	1,898,787
Pennsylvania	240	511	6,055	6,566	869	317,845	20,269,934	3,387,341	6,105,317
South Atlantic Division:									
Delaware	.....	4	180	184	29	8,469	517,237	82,244	142,755
Maryland	12	131	1,173	1,304	121	61,562	2,764,154	756,868	1,083,524
District of Columbia.	22	92	653	745	96	31,150	.....	510,601	905,778
Virginia	29	91	466	557	80	27,222	873,788	261,106	319,134
West Virginia	13	22	203	225	36	10,991	577,798	119,077	190,243
North Carolina	22	60	168	228	34	10,997	270,260	99,606	120,718
South Carolina	19	13	143	156	17	8,014	226,416	91,863	114,022
Georgia	26	74	430	504	65	24,599	1,221,680	208,836	349,270
Florida	4	16	66	82	25	4,782	85,885	44,723	56,880
South Central Division:									
Kentucky	43	70	742	812	90	38,853	2,085,216	470,621	619,357
Tennessee	51	76	349	425	50	19,547	952,772	235,773	403,668
Alabama	.....	49	213	262	28	11,056	517,700	117,654	.....
Mississippi	5	16	121	137	22	10,622	233,386	60,602	72,648
Louisiana	.....	34	432	466	.....	.....	.....	.....	260,160
Texas	46	150	578	728	145	34,622	2,100,628	441,102	629,284
Arkansas	5	26	165	191	40	.....	.....	.....	.....
Oklahoma	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Central Division:									
Ohio	198	381	3,738	4,119	534	205,163	16,240,628	2,573,788	4,453,397
Indiana	80	169	1,459	1,628	238	77,858	5,852,171	962,405	1,365,696
Illinois	299	283	4,170	4,453	453	198,424	13,817,257	2,930,994	5,051,512
Michigan	99	114	1,935	2,049	318	94,874	6,106,753	1,059,415	2,012,649
Wisconsin	86	123	1,349	1,472	244	74,691	4,296,412	819,640	1,261,446
Minnesota	96	79	1,165	1,244	152	54,280	5,831,285	863,761	1,790,239
Iowa	68	79	1,146	1,225	196	56,255	3,770,029	645,323	1,110,021
Missouri	91	168	1,889	2,057	256	107,245	6,753,685	1,219,283	2,127,712
North Dakota	2	1	37	38	7	1,895	290,000	28,822	52,072
South Dakota	2	4	30	34	7	1,375	350,000	20,300	32,545
Nebraska	30	29	546	575	114	25,869	2,812,440	369,773	728,859
Kansas	23	134	669	803	153	43,793	2,747,107	418,596	885,564
Western Division:									
Montana	4	5	62	67	23	3,250	400,000	57,253	77,391
Wyoming	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colorado	27	39	337	376	51	16,339	2,956,875	298,997	852,076
New Mexico	.....	4	5	9	3	450	12,000	2,200	2,200
Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah	5	34	67	101	39	5,335	458,946	60,319	143,967
Nevada	3	2	20	22	4	1,550	30,000	17,700	30,000
Idaho	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington	11	.....	.....	233	.....	.....	.....	.....	.....
Oregon	12	11	150	161	20	9,835	760,517	152,145	222,796
California	113	101	1,457	1,558	219	73,481	8,167,087	1,510,289	2,297,605

[1]See footnote on p. 613.

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TABLE 10.—*Summary*[1] *by States of statistics of public high schools in cities and villages containing over 4,000 inhabitants.*

State.	Number of high schools.	Number of instructors.	Number of pupils enrolled.			Number graduated during 1889–90.		
			Male.	Female.	Total.	Male.	Female.	Total.
1	2	3	4	5	6	7	8	9
United States	865	4,289	51,560	83,383	134,943	5,185	11,260	16,445
North Atlantic Division	311	1,814	24,134	34,860	58,994	2,644	5,075	7,719
South Atlantic Division	74	306	2,998	5,574	8,472	368	820	1,188
South Central Division	79	235	2,305	4,409	6,814	173	596	769
North Central Division	355	1,728	19,847	35,044	54,891	1,771	4,308	6,079
Western Division	46	206	2,276	3,496	5,772	229	461	690
North Atlantic Division:								
Maine	15	75	988	1,274	2,262	101	200	301
New Hampshire	7	34	402	561	963	78	118	196
Vermont	5	20	230	313	543	26	40	66
Massachusetts	69	495	6,760	8,807	15,567	858	1,439	2,297
Rhode Island	9	54	661	1,021	1,682	77	113	190
Connecticut	17	108	1,524	2,145	3,669	202	247	449
New York	174	525	7,246	10,613	17,859	569	1,398	1,967
New Jersey	27	127	1,562	2,524	4,086	168	335	496
Pennsylvania	88	376	4,761	7,602	12,363	570	1,185	1,755
South Atlantic Division:								
Delaware	3	13	151	223	374	11	23	34
Maryland	8	49	477	880	1,357	40	146	186
District of Columbia	2	53	604	1,163	1,767	135	195	330
Virginia	19	60	612	1,183	1,795	39	127	166
West Virginia	12	36	320	430	750	19	64	83
North Carolina	10	27	267	389	656	49	85	134
South Carolina	5	16	22	280	302	2	30	32
Georgia	11	37	487	905	1,292	65	123	188
Florida	4	16	58	121	179	8	27	35
South Central Division:								
Kentucky	15	58	796	1,326	2,122	61	156	217
Tennessee	9	34	279	625	904	32	97	129
Alabama	10	26	198	489	687	8	56	64
Mississippi	9	18	40	169	209	9	35	44
Louisiana	3	21	233	508	741	30	89	109
Texas	26	69	620	1,115	1,735	24	123	147
Arkansas	7	14	139	177	416	19	40	59
Oklahoma								
North Central Division:								
Ohio	73	328	4,505	7,586	12,091	420	1,033	1,453
Indiana	42	167	1,994	3,496	5,490	151	416	567
Illinois	58	322	3,208	6,714	9,922	283	867	1,150
Michigan	41	241	2,952	4,498	7,450	256	448	704
Wisconsin	35	147	1,716	2,496	4,212	131	248	379
Minnesota	20	127	1,165	1,643	2,808	86	184	270
Iowa	24	121	1,411	2,591	4,002	162	325	487
Missouri	30	148	1,548	3,472	5,020	127	455	582
North Dakota	2	7	45	109	154	3	11	14
South Dakota	1	4	24	56	80	0	3	3
Nebraska	10	53	490	880	1,370	66	124	190
Kansas	19	63	789	1,503	2,292	86	194	280
Western Division:								
Montana	2	5	42	85	127	7	6	13
Wyoming	2							
Colorado	9	49	400	631	1,031	25	69	94
New Mexico	0	0	0	0	0	0	0	0
Arizona	1	1	3	13	16	0	0	0
Utah	0	0	0	0	0	0	0	0
Nevada	1	2	25	44	69	6	10	16
Idaho								
Washington	8	19	220	288	508	15	27	42
Oregon	3	12	120	232	352	8	36	44
California	20	114	1,419	2,125	3,544	165	304	469

[1] See footnote on p. 613.

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TABLE 11.—*Summary by States of statistics of public evening schools in cities and villages containing over 4,000 inhabitants.*

State.	Number of cities in which such schools are maintained.	Number of schools.	Number of teachers.	Number of pupils enrolled.
1	2	3	4	5
United States	165	808	3,678	150,770
North Atlantic Division	107	557	2,932	114,937
South Atlantic Division	7	31	68	3,323
South Central Division	3	9	43	1,715
North Central Division	41	198	572	25,830
Western Division	7	13	63	4,965
North Atlantic Division:				
Maine	4	5	26	607
New Hampshire	6	14	48	1,699
Vermont	2	3	7	117
Massachusetts	41	184	943	87,431
Rhode Island	8	27	272	6,058
Connecticut	5	24	65	2,729
New York	10	79	786	42,008
New Jersey	13	45	230	9,923
Pennsylvania	18	176	555	24,365
South Atlantic Division:				
Delaware	2	3	7	140
Maryland	0	----	----	----
District of Columbia	1	15	44	2,510
Virginia	3	12	15	558
West Virginia	0	----	----	----
North Carolina	0	----	----	----
South Carolina	0	----	----	----
Georgia	1	1	2	115
Florida	0	----	----	----
South Central Division:				
Kentucky	2	8	41	1,633
Tennessee	0	----	----	----
Alabama	0	----	----	----
Mississippi	0	----	----	----
Louisiana	0	----	----	----
Texas	1	1	2	----
Arkansas	0	----	----	----
Oklahoma	0	----	----	----
North Central Division:				
Ohio	12	60	71	3,425
Indiana	6	6	10	356
Illinois	3	44	228	10,308
Michigan	6	12	24	1,348
Wisconsin	2	22	75	2,931
Minnesota	5	28	92	4,044
Iowa	4	10	12	536
Missouri	1	7	54	2,789
North Dakota	0	----	----	----
South Dakota	0	----	----	----
Nebraska	1	1	1	67
Kansas	1	2	5	26
Western Division:				
Montana	0	----	----	----
Wyoming	0	----	----	----
Colorado	1	1	5	a100
New Mexico	0	----	----	----
Arizona	0	----	----	----
Utah	0	----	----	----
Nevada	0	----	----	----
Idaho	0	----	----	----
Washington	0	----	----	----
Oregon	1	1	3	197
California	5	11	55	4,668

a Estimated.

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CHAPTER II.

SALARIES OF TEACHERS IN CITY PUBLIC SCHOOLS.

A.—*Annual salaries of teachers in the following cities: Birmingham, Ala., Little Rock, Ark., Los Angeles, Cal., San Francisco, Cal., Denver, Colo., Bridgeport, Conn., New Haven, Conn., Wilmington, Del., Washington, D. C., Atlanta, Ga., Chicago, Ill., Peoria, Ill., Evansville, Ind., Indianapolis, Ind., Des Moines, Iowa (west side), Des Moines, Iowa (east side), Sioux City, Iowa, Kansas City, Kans., Covington, Ky., Louisville, Ky., Portland, Me., Cambridge, Mass., Holyoke, Mass., Lawrence, Mass., Lowell, Mass., New Bedford, Mass., Salem, Mass., Worcester, Mass., Detroit, Mich., Grand Rapids, Mich., Saginaw, Mich. (east side), Minneapolis, Minn., St. Paul, Minn., Kansas City, Mo., St. Joseph, Mo., Helena, Mont., Omaha, Nebr., Nashua, N. H., Camden, N. J., Jersey City, N. J., Newark, N. J., Paterson, N. J., Trenton, N. J., Albany, N. Y., Brooklyn, N. Y., Buffalo, N. Y., New York, N. Y., Rochester, N. Y., Syracuse, N. Y., Troy, N. Y., Yonkers, N. Y., Columbus, Ohio, Dayton, Ohio, Springfield, Ohio, Portland, Oregon, Allegheny, Pa., Philadelphia, Pa., Pittsburg, Pa., Reading, Pa., Providence, R. I., Charleston, S. C., Memphis, Tenn., Nashville, Tenn., Dallas, Tex., Salt Lake City, Utah, Richmond, Va., Tacoma, Wash., Milwaukee, Wis.*

B.—*A contribution to the history of teachers' salaries, being, as far as the available records show, a detailed statement of the salaries paid in Baltimore, Md., St. Louis, Mo., Boston, Mass., New Orleans, La., and Cincinnati, Ohio, for each year since the establishment of public schools in those cities.* (Tables 1 to 28.)

A.—*Annual salaries of teachers in 69 of the principal cities of the United States.*

BIRMINGHAM, ALA.

[From manuscript report, 1892.]

Teacher of training class, female	$1,100
HIGH SCHOOL.	
1 principal, male	1,350
1 first assistant, female	765
1 second assistant, female	495
1 third assistant, female	675
1 teacher of German, female	562
ELEMENTARY SCHOOLS.	
2 principals, male	$1,300
1 principal, female	1,300
1 principal, male	720
1 principal, male	540
1 principal, male	495
1 principal, male	360
ELEMENTARY SCHOOLS—continued.	
1 assistant, female	$540.00
6 assistants, female	517.50
1 assistant, female	495.00
2 assistants, female	472.50
5 assistants, female	450.00
6 assistants, female	427.50
10 assistants, female	405.00
9 assistants, female	382.50
13 assistants, female	360.00
4 assistants, female	337.50
2 assistants, female	315.00
9 assistants, female	270.00
1 assistant, colored, male	495.00
1 assistant, colored, male	405.00
3 assistants, colored, male	360.00
3 assistants, colored, male	315.00

LITTLE ROCK, ARK.

[Compiled from the Report of the Public Schools, 1888-89, p. 62.]

Superintendent	$2,100.00
Principal of high school	1,200.00
Principals of buildings of more than 8 rooms	1,200.00
Principals of buildings of from 4 to 8 rooms	720.00
First assistants in high school	697.50
Experienced teachers holding first-grade license	495.00
Inexperienced teachers holding first-grade license	$450.00
Experienced teachers holding second-grade license	450.00
Inexperienced teachers holding second-grade license	405.00

The board may employ four experienced teachers holding first-grade licenses at $540 per annum.

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LOS ANGELES, CAL.

[Compiled from the Annual Report of the Board of Education, 1890-91, p. 101.]

Principal of the high school	$1,350
Teachers in high school	900 to 1,125
Principals of 12-room buildings	1,215
Principals of 8-room buildings	1,080
Principals of 4-room buildings	900
Principal of normal primary	900
Teachers in second and third grades	585 to 675
Teachers in other grades	$675 to $765
Kindergarten principal	675
Kindergarten teachers	450 to 540
Kirdergarten assistants, not over	225
Drawing teacher	1,170
Writing teacher	1,125
Music teacher	1,125
Night-school teacher, per month	50

OAKLAND, CAL.

[Report of the Public Schools, 1886, p. 16.]

1 teacher at	$2,700
10 teachers at	1,800
1 teacher at	1,500
15 teachers at	1,200
6 teachers at	1,080
13 teachers at	1,050
2 teachers at	1,012
3 teachers at	930
13 teachers at	900
26 teachers at	$870
24 teachers at	840
18 teachers at	810
6 teachers at	780
1 teacher at	770
1 teacher at	690
1 teacher at	630
2 teachers at	600
1 teacher (evening school) at	360

SAN FRANCISCO, CAL.

[Compiled from the Report of the Superintendent of Common Schools, 1890-91, pp. 42-45.]

HIGH SCHOOLS.

Principals	$3,000
Vice-principals	1,980
Heads of departments	1,860
Assistants	1,680
Head of normal department	2,100
Teachers of music	600
Teachers of elocution	600
Teachers of mechanical drawing	720
Teachers of sewing	720
Teachers of industrial work	1,200

COMMERCIAL SCHOOL.

Principal	$2,400
Heads of departments	1,800
Head assistants	900
Assistants	720
Assistants from post-graduate class	480
Teacher of penmanship	600
Teacher of stenography	900
Teacher of Spanish	1,200

Two assistants from post-graduate class, same salary as grammar teacher.

PRINCIPALS OF GRAMMAR AND PRIMARY SCHOOLS.

5 principals of grammar schools	$2,400
11 grammar principals and 1 primary principal	2,100
7 primary principals	1,800
11 primary principals	1,620
14 primary principals	1,560
2 primary principals	1,440
8 primary principals	1,320
5 primary principals	1,200

VICE-PRINCIPALS AND INSPECTORS.

Vice-principals, grammar schools	$1,500
Head inspecting teacher	3,000
Inspecting teacher	2,100
Kindergarten teacher	1,200

ASSISTANTS IN GRAMMAR AND PRIMARY SCHOOLS.

First year	$600
After 1 year's experience *a*	636
After 2 years' experience	672
After 3 years' experience	708
After 4 years' experience	744
After 5 years' experience	780
After 6 years' experience	816
After 7 years' experience	852
After 8 years' experience	888
After 9 years' experience	924
After 10 years' experience	960

EVENING SCHOOLS.

Principal of Lincoln evening school, per month	$100
Principal of other evening schools, per month	60
Assistant principal of Lincoln evening school, per month	75
Head teacher of mechanical drawing, Lincoln evening school, per month	100
Assistants in evening schools, per month	50

SUBSTITUTE TEACHERS.

Substitutes, day schools, for reporting, per day	$1.00
Substitutes, day schools, when teaching, per day	3.00
Substitutes when teaching in high schools, per day	6.00
Substitutes, when teaching in commercial school, per day	5.00
Substitutes, evening schools, for reporting, per evening	1.00
Substitutes, evening schools, when teaching, per evening	2.50

a All experience in public schools of the United States to count.

NUMBER OF TEACHERS RECEIVING THE VARIOUS SALARIES IN THE FOREGOING SCHEDULES.

4 teachers at	$3,000
6 teachers at	2,400
14 teachers at	2,100
2 teachers at	1,980
10 teachers at	1,860
11 teachers at	1,800
18 teachers at	1,680
11 teachers at	1,620
14 teachers at	1,560
22 teachers at	1,500
2 teachers at	1,440
9 teachers at	$1,320
10 teachers at	1,200
1 teacher at	1,080
314 teachers at	960
13 teachers at	924
4 teachers at	900
24 teachers at	888
30 teachers at	852
88 teachers at	816
48 teachers at	780
22 teachers at	744
7 teachers at	$720
23 teachers at	708
43 teachers at	672
33 teachers at	636
45 teachers at	600
2 teachers at	480

36 substitutes, day schools, paid by the day.

5 substitutes, evening schools, paid by the evening.

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DENVER, COLO., DISTRICT NO. 1.

After a teacher has been with us one year she receives $760 a year, or $63.33 per calendar month. The pay is the same, without regard to the grade taught. The exceptions are, first, that the first assistant in a large building receives $45 a year more, and, second, the teachers of beginners, when they take charge of two schools or over 70 pupils, receive an addition of 25 per cent. Assistants in the high school receive from $500 to $1,200, according to the time of service and scholarship required.—[Sixteenth Annual Report of the Board of Education, 1889-90, p. 11.]

BRIDGEPORT, CONN.

[Compiled from the Fourteenth Annual Report of the Board of Education, 1889-90, pp. 33-42.]

Superintendent, male	$2,500
HIGH SCHOOL.	
1 principal, male	$2,500
1 assistant, male	1,100
1 assistant, male	850
4 assistants, female	900
1 assistant, female	850
1 assistant, female	750
TRAINING SCHOOL.	
1 principal, male	$1,500
1 assistant, female	700
1 assistant, female	650
1 assistant, female	600
2 assistants, female	550
1 assistant, female	525
1 assistant, female	500
9 assistants, female	300
ELEMENTARY SCHOOLS.	
2 principals, male	$1,500
1 principal, male	900
1 principal, female	900
1 principal, female	850
3 principals, female	700
2 principals, female	650
2 principals, female	625
1 principal, female	600
1 principal, female	550
2 principals, female	525
1 principal, female	475
1 principal, female	450
6 assistants, for ninth grade, female	625
5 assistants, female	550
13 assistants, female	525
23 assistants, female	500
34 assistants, female	475
15 assistants, female	450
7 assistants, female	425
5 assistants, female	375
Special teacher of penmanship and drawing, male	1,000

NEW HAVEN, CONN.

[Compiled from the Manual of the New Haven Public Schools, 1891, pp. 40-42.]

The maximum salaries shall be as follows:

Principals, grammar schools	$2,500
Assistant principals, male	1,000
Assistant principals, female—	
2-room building	500
3-room building	550
4-room building	600
More than four rooms, $10 for each additional room.	
Masters of ungraded schools	800
Teachers, female, Grade I*—	
Room A	600
Room 1	600
Room 1*a*	500
Room 1*b*	475
Room 1*c*	450
Teachers, female, Grade II—	
Room 2	450
Room 2*a*	460
Room 2*b*	460
Room 2*c*	470
Teachers, female, Grade III—	
Room 3	480
Room 3*a*	490
Room 3*b*	500
Teachers, female, Grade IV—	
Room 4	530
Room 4*a*	545
Room 4*b*	560
Teachers, female, Grade V—	
Room 5	$580
Room 5*a*	600
Room 5*b*	620
Teachers, female, Grade VI—	
Room 6	630
Room 6*a*	640
Room 6*b*	650
Teachers, female, Grade VII—	
Room 7	675
Room 7*a*	700
Teachers, female, Grade VIII—	
Room 8	750
Assistant teachers, female, Grade VIII.	550
Kindergartners	450
Graduates of the training school appointed as substitutes, first year	300
Substitutes, after first year	350
Special instructors—	
Music	2,300
Mechanical drawing	1,200
Freehand drawing	1,200
Sewing	650
Cooking	800
Manual training	1,000
Kindergartner, training class for teachers	600
Principals of high school	2,700

*Lowest grade.

The salaries of all teachers in the high school and in the training school for teachers shall receive separate consideration, and shall be fixed according to experience and the character of the work to be performed.

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[Compiled from the Annual Report of the Board of Education, 1890-91, pp. 88 and 94.]

The following are the salaries of teachers in the high and training schools for 1891-92:

HILLHOUSE HIGH SCHOOL.	
Principal, male	$2,500
1 teacher, male	2,000
1 teacher, male	1,800
1 teacher, male	1,600
2 teachers, male	1,500
1 teacher, male	1,300
1 teacher, male	1,200
3 teachers, female	1,000
2 teachers, female	900
2 teachers, female	800
2 teachers, female	750
3 teachers, female	700
1 teacher, female	300

WELCH AND CEDAR STREET TRAINING SCHOOLS.	
1 principal, female	$1,500
1 principal, female	1,300
1 associate principal, female	1,300
1 teacher, female	900
1 teacher, female	800
1 teacher, female	750
1 teacher, female	675
2 teachers, female	650
1 teacher, female	610
1 teacher, female	600
1 teacher, female	550
1 teacher, female	500
3 teachers, female	500
1 teacher, female	450
3 teachers, female	400
4 teachers, female	350
1 teacher, female	300
1 kindergartner	600
1 kindergartner	350

WILMINGTON, DEL.

1 teacher at	$1,700	5 teachers at	$650	21 teachers at	$425
1 teacher at	1,200	5 teachers at	600	1 teacher at	380
4 teachers at	900	16 teachers at	550	70 teachers at	365
2 teachers at	800	1 teacher at	525	20 teachers at	300
2 teachers at	750	14 teachers at	500	4 teachers serving without salary.	
3 teachers at	700	18 teachers at	460		

Four divisions in the training school are taught by pupil-teachers who are in training and on trial. These teachers serve eighty days in this school and receive salary at the rate of $300 a year for the last twenty days.

[Reports concerning the Public Schools for 1890-91, p. 8.]

WASHINGTON, D. C.

[Report of the Board of Trustees, 1890-91, p. 15.]

WHITE SCHOOLS.	
1 superintendent at	$2,700
6 supervising principals at	2,000
1 supervising principal at	1,600
2 supervising principals at	1,400
1 principal of normal school at	1,500
2 teachers in normal school at	1,000
2 teachers in normal school at	800
2 teachers in normal school at	750
1 principal of high school at	2,500

COLORED SCHOOLS.	
1 superintendent at	$2,250
2 supervising principals at	2,000
1 supervising principal at	1,100
1 principal of normal school at	1,500
1 teacher in normal school at	800
2 teachers in normal school at	700
1 principal of high school at	1,800

The salaries of other teachers are not stated separately.

[From manuscript report, 1892.]

The number of persons receiving the several salaries paid in 1892 was as follows:

1 superintendent at	a$3,300	41 at	$1,000	83 at	$650
1 principal high school at	2,500	14 at	950	4 at	600
1 superintendent colored schools at	a 2,250	12 at	900	5 at	575
11 at	2,000	9 at	875	97 at	550
1 at	1,800	14 at	850	1 at	525
9 at	1,500	53 at	825	90 at	500
1 at	1,400	12 at	800	30 at	475
4 at	1,300	68 at	775	41 at	450
14 at	1,200	32 at	750	38 at	425
4 at	1,100	1 at	725	66 at	400
		86 at	700		
		3 at	675		

a The salary of this officer has been increased during the year.

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ATLANTA, GA.

[Compiled from the Twentieth Annual Report of the Board of Education, 1891, pp. 7-11.]

BOYS' HIGH SCHOOL.	
1 principal, male	$1,700
1 teacher, male	1,600
2 teachers, male	1,500
GIRLS' HIGH SCHOOL.	
1 principal, female	$1,450
1 assistant principal, female	700
1 teacher, female	1,200
1 teacher, female	950
1 teacher, female	900
2 teachers, female	800
3 teachers, female	750
1 teacher, female	600
ELEMENTARY SCHOOLS.	
1 principal, male	$1,600
1 principal, female	1,420
6 principals, female	1,200
2 principals, female	800
1 principal, female	700
1 principal, female	650
1 assistant principal, female	700
7 assistant principals, female	600
3 assistant principals, female	550
ELEMENTARY SCHOOLS—continued.	
1 assistant principal, female	$450
9 teachers, female (seventh grade)	600
9 teachers, female (sixth grade)	575
11 teachers, female (fifth grade)	550
12 teachers, female (fourth grade)	525
13 teachers, female (third grade)	500
15 teachers, female (second grade)	500
12 teachers, female (first or lowest grade)	600
2 teachers, female (first or lowest grade)	500
NIGHT SCHOOL.	
1 principal, male	$1,800
3 assistants, female	600
NEGRO SCHOOLS.	
4 principals, male	$650
4 assistant principals, female	250
4 teachers, female (seventh grade)	400
4 teachers, female (sixth grade)	375
4 teachers, female (fifth grade)	375
4 teachers, female (fourth grade)	350
4 teachers, female (third grade)	350
4 teachers, female (second grade)	350
4 teachers, female (first or lowest grade)	350

CHICAGO, ILL.

[Compiled from Thirty-sixth Annual Report of the Board of Education, 1889-90, pp. 142-145.]

SUPERINTENDENTS.	
Superintendent of schools	$5,000
2 assistant superintendents	4,000
3 assistant superintendents	3,500
3 assistant superintendents	3,000
SPECIAL TEACHERS.	
German	$2,400
Singing, high schools	2,000
Singing, grammar department	2,200
Singing, primary department	1,900
Singing, assistant, primary department	1,400
Drawing, high schools *a*	2,500
Drawing, grammar, and primary departments	2,200
Drawing, assistant	1,800
Drawing, assistant	1,000
Physical culture	1,800
Physical culture, 1 assistant, high schools	1,000
Physical culture, 8 assistants, grammar grades	900
Physical culture, 5 assistants, primary grades	750
Physical culture, 1 assistant, primary grades *b*	450
HIGH SCHOOLS.	
1 principal	$2,800
2 principals	2,600
1 principal	2,200
1 acting principal	2,500
11 assistants	2,000
6 assistants	1,800
9 assistants	1,500
11 assistants	1,400
7 assistants	1,300
5 assistants	1,200
4 assistants	1,100
7 assistants	1,000
1 assistant	900
1 assistant	800
PRINCIPALS OF GRAMMAR SCHOOLS.	
38 principals, first group	$2,200
4 principals, first group:	
First year	2,000
Second year	2,100
Third year	2,200
8 principals, second group:	
First year	1,700
Second year	1,800
Third year	1,900
PRINCIPALS OF GRAMMAR SCHOOLS—cont'd.	
8 principals, second group—continued.	
Fourth year	1,950
Fifth year	2,000
1 principal, third group:	
First year	1,400
Second year	1,500
Third year	1,600
1 principal, third group	1,500
1 principal, third group	1,400
2 principals, third group	1,200
PRINCIPALS OF PRIMARY SCHOOLS.	
15 principals, first group:	
First year	$1,400
Second year	1,450
Third year	1,500
Fourth year	1,600
9 principals, second group:	
First year	1,400
Second year	1,450
Third year	1,500
6 principals, third group:	
First year	1,250
Second year	1,350
2 principals, fourth group	1,100
2 principals, fourth group	1,050
ASSISTANTS, PRIMARY AND GRAMMAR SCHOOLS.	
Assistants to principals	$1,100
Head assistants, grammar schools:	
First 5 years	900
Second 5 years	950
After 10 years	1,000
Head assistants, primary schools:	
First 5 years	850
Second 5 years	900
After 10 years	950
Assistants, primary grades:	
First year	400
Second year	475
Third year	575
Fourth year	650
Fifth year	700
Sixth year	775
Assistants, grammar grades:	
First year	450
Second year	525
Third year	600
Fourth year	650
Fifth year	700
Sixth year	775

a Also in charge of manual-training department. *b* Half day.

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Second teachers in half-day divisions receive $50 per annum less than assistants in primary grades. Three reserve teachers at $700 each.

SUBSTITUTES.

Four substitutes, to be employed at the discretion of the superintendent, $4 each per day of actual service; other substitutes, $1.50 per day of actual service.

CADETS.

After two months' satisfactory service, 75 cents per day of actual service; after six months' service, $1.25 per day.

PEORIA, ILL.

[Compiled from the Thirty-third Annual Report of the Board of School Inspectors, 1888-89, pp. 46-49.]

HIGH SCHOOL.	
1 principal, male	$1,800
2 assistants, male	1,400
1 assistant, female	1,100
1 assistant, male	1,000
1 assistant, female	1,000
1 assistant, female	850
2 assistants	800
1 assistant	750
1 assistant, female	600
ELEMENTARY SCHOOLS.	
5 principals, male	$1,500
1 principal, male	800
3 principals, female	800
1 principal, female	700

ELEMENTARY SCHOOLS—continued.	
5 assistants, female	$550
5 assistants, female	525
14 assistants, female	500
17 assistants, female	475
13 assistants, female	450
7 assistants, female	425
11 assistants, female	400
5 assistants, female	375
12 assistants, female	350
15 assistants, female	325
EVENING SCHOOLS.	
3 teachers, male	$650
2 teachers, male	250

EVANSVILLE, IND.

[Annual Report of the Public Schools, 1887-88, p. 100.]

Maximum salaries of assistants:

To those teaching in the—	
Second and third grades	$500
Fourth, fifth, and sixth grades	550
First, seventh, and eighth grades	600

INDIANAPOLIS, IND.

[Compiled from the Manual of the Public Schools, 1888, p. 56.]

Supervising principals:	
First year	$1,000
Second year	1,100
Third year	1,200
Principals of 1-room buildings	600
Principals of 2-room buildings	650
Principals of buildings of 3 or more rooms, $800; and $25 additional for each room over four.	
Maximum salaries of teachers:	
Those teaching second and third grades	500
Those teaching the fourth, fifth, and sixth grades, and German	550
Those teaching the first, seventh, and eighth grades	$600
All teachers receive salaries proportioned to their experience as follows:	
First 5 months in practice schools	150
First year thereafter	350
Second year thereafter	450
Third year thereafter	500
Fourth year thereafter	550
Fifth year thereafter	600

The rule as to experience does not operate to give to any teacher a higher salary than that fixed as a maximum for the grade taught. Those who teach both English and German receive $25 additional, and all teachers of German only, who teach part of a day in one building and part in another, receive $25 additional. Teachers of pupils studying German in the sixth, seventh, and eighth grades receive $600 per annum maximum.

Substitutes in primary grades receive $2 per day; in grammar grades, $2.50 per day, and in the high school $4 per day.

The board of school commissioners annually fix the salaries of the superintendent, assistant superintendents, special teachers, critic teachers, and teachers in the high school.

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DES MOINES, IOWA (WEST SIDE).

[From manuscript report, 1892.]

1 superintendent	$2,250
HIGH SCHOOL.	
1 Principal	$1,700
1 teacher	1,550
1 teacher	1,200
6 teachers	900
1 teacher	795
1 teacher	540
ELEMENTARY SCHOOLS.	
2 principals	$1,200
1 principal	1,100
3 principals	950
2 principals	780
2 principals	735
1 principal	675
4 teachers	675
1 teacher	630
10 teachers	585
ELEMENTARY SCHOOLS—continued.	
37 teachers	540
8 teachers	495
7 teachers	459
5 teachers	405
5 teachers	360
KINDERGARTENS.	
1 supervisor	$850
2 teachers	540
1 teacher	495
4 teachers	450
4 teachers	405
5 teachers	360
SPECIAL TEACHERS.	
Drawing	$850
Penmanship	850
Physical culture	850

DES MOINES, IOWA (EAST SIDE).

[From manuscript report, 1892.]

Superintendent	$1,600
Principal of high school	1,300
Teachers in high school	600 to 650
4 principals of elementary schools	675
3 principals of elementary schools	630
3 principals of elementary schools	$855
Teachers in elementary schools:	
First year	350
Annual increase	50
Maximum	500

SIOUX CITY, IOWA.

[From manuscript report, 1892.]

HIGH SCHOOL.	
Principal	$1,500
5 teachers	900
1 teacher	800
ELEMENTARY SCHOOLS.	
1 principal	$1,000
3 principals	900
3 principals	800
1 principal	750
2 principals	700
1 teacher	750
1 teacher	700
6 teachers	$650
1 teacher	625
27 teachers	600
18 teachers	550
1 teacher	525
13 teachers	500
20 teachers	450
26 teachers	400
SPECIAL TEACHERS.	
1 teacher of training class	$1,200
1 supervisor of music	1,200
1 supervisor of physical culture	1,200
1 supervisor of drawing	900

KANSAS CITY, KANS.

Superintendent	$2,000
HIGH SCHOOL.	
Principal	$1,350
Teachers (male)	1,000
Teachers (female)	800
ELEMENTARY SCHOOLS.	
Principals of buildings of eight or more rooms	$945
Principals of buildings of less than eight rooms	540

With $45 per annum for each room supervised.

	Holders of certificates.		
	First grade.	Second grade.	Third grade.
Teachers: *a*			
First year	$414	$387	$360
Second year	432	405	378
Third year	450	423	396
Fourth year	468	441	414
Fifth year	495	468	441
Sixth year	522	495	468

a Substitutes, $2 per day.

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COVINGTON, KY.

[Compiled from the Annual Report of the Public Schools, 1889-90, p. 9.]

HIGH SCHOOL.

1 principal, male	$1,600
1 first assistant, male	1,250
1 assistant, female	850
1 assistant, female	700
2 assistants, female	650

DISTRICT SCHOOLS.

4 principals, male	$1,250
6 teachers, female	600
7 teachers, female	550
9 teachers, female	500
25 teachers, female	450
6 teachers, female	400
4 teachers, female	350

COLORED SCHOOL.

1 principal, male	$1,000
1 teacher, female	500
2 teachers, female	450
2 teachers, female	400
1 teacher, female	350

SPECIAL TEACHERS.

Music, male	$1,250
Penmanship, female	700
Drawing, female	500

LOUISVILLE, KY.

[School Manual, 1890-'91, p. 71.]

Superintendent	$2,500
Principals of high schools	2,250
Professor of natural science (Male High School	1,800
Professors, Male High School	1,500
Adjunct professors, Male High School	1,000
Professors, Female High School	1,000
Teacher of normal class	1,000
Teacher, Colored High School	1,000
Teacher, Colored High School	800
Principals, intermediate schools	1,550
Principals, secondary schools	1,500
Principals, primary schools	680
First-class assistants	$680
Second-class assis ants	570
Third-class assistants	520
Fourth-class assistants	470
Fifth-class assistants	420
Fifth-class assistants (first year)	400
Substitutes for principals of intermediate and secondary schools	1,000
Substitutes, intermediate department, at the rate of	500
Substitutes in secondary and primary schools, at the rate of	400

NEW ORLEANS, LA.

For historical statement see pages 680-682.

PORTLAND, ME.

[Compiled from the School Report, 1890-91, pp. 53-56.]

HIGH SCHOOL.

1 principal, male	$2,000
1 assistant, male	1,100
2 assistants, male	1,000
1 assistant, female	750
1 assistant, female	700
7 assistants, female	500

GRAMMAR SCHOOLS.

2 principals, male	$1,440
1 principal, male	1,500
1 principal, male	1,050
1 principal, female	1,000
1 principal, female	800
4 assistants, female	600
1 assistant, female	500
14 assistants, female	450
18 assistants, female	425
1 assistant, female	375

PRIMARY SCHOOLS.

7 principals, female	$500
1 assistant, female	475
1 assistant, female	450
3 assistants, female	425
60 assistants, female	400
1 assistant, female	375
10 assistants, female	300

PRACTICE SCHOOL.

1 principal, female	$900
1 acting principal, female	650
3 assistants, female	250
9 assistants, female	100

UNGRADED SCHOOLS.

1 principal, male	$1,000
2 assistants, female	400
2 teachers, female	350
1 teacher, female	300

SPECIAL TEACHERS.

1 female special teacher	$425
Writing and drawing, 1 male	1,400
Music, 1 female	800

PORTLAND SCHOOL FOR THE DEAF.

1 principal, female	$1,500
1 assistant, female	500
1 assistant, female	450
1 assistant, female	350
1 assistant, female	300
1 assistant, female	250
1 assistant, female, in training	228
1 assistant, female, in training	190

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BALTIMORE, MD.

For historical statement see pp. 647–655.

BOSTON, MASS.

For historical statement see pages 668–679.

CAMBRIDGE, MASS.

[Compiled from the appendix to the School Report, 1883, p. 23.]

Superintendent	$3,000
3 truant officers	900

LATIN SCHOOL AND ENGLISH HIGH SCHOOL.

Head masters	$3,000
Masters	2,000
First assistants	1,150
Assistants:	
First year	800
Second year	875
Third year	950

GRAMMAR SCHOOLS.

Masters	$2,000
Submasters	1,000
First assistant	700
Assistants:	
First year	400
Second year	470
Third year	520
Fourth year	570
Fifth year	620

PRIMARY SCHOOLS.

The salaries of the teachers of the primary schools are the same as those of assistant teachers in the grammar schools.

Principals of the primary schools receive, in addition to the regular salary, $5 per annum for each separate class in the schools under their charge.

SPECIAL TEACHERS.

Teacher of singing	$1,700
Teacher of physics	1,500
Teacher of drawing	900

SUBSTITUTES.

When acting as assistants in grammar and primary schools, $1 for each school session.

HOLYOKE, MASS.

[Compiled from the Annual Report of the School Committee, 1889–90, pp. 108–111.]

HIGH SCHOOL.

1 principal	$2,000
1 assistant	1,300
1 assistant	1,050
1 assistant	1,000
1 assistant	750
1 assistant	700
1 assistant	650
1 assistant	300

ELEMENTARY SCHOOLS.

2 principals	$1,800
1 principal	1,400
1 principal	1,000
2 principals	700
2 principals	600
1 principal	500
4 assistants	600
3 assistants	550
1 assistant	534
5 assistants	525
16 assistants	500
16 assistants	475
6 assistants	450

ELEMENTARY SCHOOLS—continued.

19 assistants	$425
1 assistant	400
3 assistants	375
1 assistant	325
1 assistant	100

UNGRADED SCHOOLS.

2 teachers	$600
3 teachers	475
1 teacher	450

SPECIAL TEACHERS.

Vocal music, 1 at	$800
Drawing, 1 at	1,000
Writing, 1 at	800
Calisthenics, 1 at	400

EVENING SCHOOLS.

1 teacher, per evening	$2.00
66 teachers, per evening	1.25

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LAWRENCE, MASS.

[Compiled from the Forty-eighth Annual Report of the School Committee, 1890, p. 45.]

Superintendent	$2,500
Truant officer	1,000
HIGH SCHOOL.	
1 master	$2,500
1 submaster	1,200
1 assistant, female	1,000
3 assistants, female	900
3 assistants, female	700
GRAMMAR SCHOOLS.	
1 master	$2,000
1 master	1,400
1 master	1,000
9 assistants, female	550
14 assistants, female	500
6 assistants, female	450
5 assistants, female	400
PRIMARY SCHOOLS.	
3 principals, females	$600
PRIMARY SCHOOLS—continued.	
12 principals, female	$550
31 assistants, female	500
13 assistants, female	450
5 assistants, female	400
TRAINING SCHOOL.	
1 principal, female	$1,200
1 assistant principal, female	700
5 subteachers, female	150
7 subteachers, female	100
SPECIAL TEACHERS.	
Drawing, 1 male	$1,200
Music, 1 male	600
Sewing, 2 females	

Salaries of teachers of evening schools are not stated.

LOWELL, MASS.

[Compiled from the Sixty-fifth Annual Report of the School Committee, 1890, p. 69.]

HIGH SCHOOL.	
Principal, male	$2,200
Assistants, male	1,800
First assistants, female	800
Assistants, female:	
First year	$600
Second year	650
Third year	700
GRAMMAR SCHOOLS.	
Principals, male	$1,800
Assistants, female:	
First year	450
Second year	500
Third year	600
PRIMARY SCHOOLS.	
Teachers, female:	
First year	$450
Second year	500
Third year	600
TRAINING SCHOOL.	
Principal, female	$1,500
TRAINING SCHOOL—continued.	
First assistant, female	$800
Second assistant, female	700
Third assistant, female	500
SPECIAL TEACHERS.	
Penmanship, 1 male	$1,250
Drawing, 1 female	1,250
Music, 1 male	1,250
TEMPORARY TEACHERS.	
Male teachers, per day	$3.00
Female teachers, high school, per day	1.75
Female teachers, other schools, per day	1.25
EVENING SCHOOLS.	
Principal, high school, per evening	$5.00
Principal, elementary school, per evening	2.00
Assistants, high school, per evening	2.00
Female assistants, elementary schools, per evening	1.25

NEW BEDFORD, MASS.

[Compiled from the Report of the School Committee, 1890, pp. 25 and 80.]

HIGH SCHOOL.	
Principal, male	$2,750
Submaster, male	1,600
Teacher of sciences, male	1,500
Assistants, female	900
TRAINING SCHOOL.	
Principal, female	$1,300
Assistant, female	700
Training teachers:	
Seniors, female...per week	4
Juniors, female.....do	3
GRAMMAR SCHOOLS.	
Principals, maximum	$1,800 to $2,000
Assistants, female, maximum	550
PRIMARY SCHOOLS.	
Principals, female, maximum	$600
Assistants, female, maximum	500
SPECIAL TEACHERS.	
Drawing, primary and grammar, female	$1,200
Drawing, high school, female	550
Music, male	1,700
Sewing, female	525
Sewing assistant, female	270
UNGRADED SCHOOLS.	
Teachers	$400 to 700
EVENING SCHOOLS.	
Drawing school, principal, male	$250.00
Drawing school, assistant, male	120.00
Elementary schools, principals, male, per week	12.00
Elementary schools, assistants, female, per week	5.50

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The salary of a primary-school principal of a four-room building is $550 a year, which is increased at the rate of $25 for each additional room. The salaries of assistant teachers in the grammar and primary grades are increased at the rate of $25 per year until the maximum salary is reached.

SALEM, MASS.

[Compiled from the Annual Report of the School Committee, 1891, p. 114.]

HIGH SCHOOL.	
Master	$2,200
Submaster	1,500
1 teacher, male	1,500
1 teacher, male	1,000
1 first assistant, female	1,100
6 assistants, female	650
GRAMMAR SCHOOLS.	
4 principals, male	$1,800
1 principal, female	1,500
1 subprincipal, female	800
GRAMMAR SCHOOLS—continued.	
5 first assistants, female	$600
29 assistants, female	500
PRIMARY SCHOOLS.	
12 principals, female	$650
41 assistants, female	500
1 music teacher, female	800
1 principal of industrial school, male	750
1 truant officer, male	800
1 truant officer, male	10

WORCESTER, MASS.

[Compiled from the Report of the Worcester Schools, 1890, p. 83.]

Superintendent	$3,500
HIGH SCHOOL.	
1 principal, male	$2,000
1 teacher, male	2,000
1 teacher, male	1,800
1 teacher, male	1,400
2 teachers, male	1,200
1 teacher, male	1,100
2 teachers, male	1,000
1 teacher, female	1,100
3 teachers, female	1,000
1 teacher, female	960
7 teachers, female	800
3 teachers, female	700
1 teacher, female	600
1 teacher, female	500
1 teacher of bookkeeping, male	600
ELEMENTARY SCHOOLS.	
6 principals, male	$2,000
1 principal, male	1,800
1 principal, male	1,500
2 principals, male	1,400
1 principal, male	1,200
ELEMENTARY SCHOOLS—continued.	
1 principal, male	$1000
1 principal, female	1,400
2 principals, female	900
7 principals, female	800
2 principals, female	600
5 principals, female	550
1 principal, female	500
30 assistants, female	600
80 assistants, female	550
124 assistants, female	500
9 assistants, female	450
SUBURBAN SCHOOLS.	
1 teacher, female	$600
19 teachers, female	500
1 teacher, female	450
SPECIAL TEACHERS.	
Drawing, 1 female teacher	$1,400
Drawing, 1 male assistant	700
Music, 1 male teacher	1,650
Music, 1 male assistant	1,000

Salaries of evening-school teachers and truant officers are not stated.

DETROIT, MICH.

[Compiled from Forty-seventh Annual Report of the Board of Education, 1889-90, pp. 28 and 29.]

Superintendent	$4,000
HIGH SCHOOLS.[a]	
Assistants:	
First year	$600
Second year	650
Third year	700
Fourth year	750
Fifth year	800
ELEMENTARY SCHOOLS.	
Principals in charge of—	
18 or more rooms	$2,000
15 to 17 rooms	1,600
12 to 14 rooms	1,300
9 to 11 rooms	1,100
8 rooms	900
6 rooms	850
ELEMENTARY SCHOOLS—continued.	
Principals in charge of—	
Less than 6 rooms	$800
First assistants in buildings of 12 or more rooms	800
Grammar and primary school teachers:	
First year	350
Second year	400
Third year	450
Fourth year	500
Fifth year	550
Sixth year	600
Seventh year	650
Eighth year	700
Ninth year	725

Teachers of half-day schools with more than 74 pupils in attendance, $50 per annum in addition to regular rates.

[a] The salaries of principals, grade principals, and heads of special departments are as agreed upon in each individual case, and are not included in the schedule.

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NUMBER OF TEACHERS RECEIVING THE SEVERAL AMOUNTS NAMED.

1 at	$2,500	1 at	$1,250	13 at	$775	32 at	$525
3 at	2,000	5 at	1,200	1 at	750	53 at	500
1 at	1,800	6 at	1,000	101 at	700	32 at	450
3 at	1,600	10 at	900	12 at	650	36 at	400
2 at	1,500	10 at	850	11 at	600	38 at	350
2 at	1,400	2 at	825	24 at	575	29 at	300
10 at	1,300	28 at	800	11 at	550	14 at	120

GRAND RAPIDS, MICH.

[Compiled from the Eighteenth Annual Report of the Board of Education, 1889-90, pp. 42 and 162.]

1 superintendent, male	$2,250
1 assistant superintendent, female	1,050

HIGH SCHOOLS.

1 principal, male	$2,000
1 principal, male	1,700
1 teacher, male	1,300
1 teacher, male	1,200
1 teacher, male	800
1 teacher, male	750
1 teacher, male	650
1 preceptress, female	1,200

HIGH SCHOOLS—continued.

1 teacher, female	$900
1 teacher, female	850
3 teachers, female	750
2 teachers, female	700
3 teachers, female	650
2 teachers, female	625
5 teachers, female	600
2 teachers, female	580
2 teachers, female	560
2 teachers, female	550
2 teachers, female	540

ELEMENTARY SCHOOLS.

Principals receive for the first room actually used as a session room, $500; for each additional session room, $25. Salaries of assistant teachers in charge of rooms shall be based on experience, as follows:

Experience.	First to third grades, inclusive.	Fourth grade.	Fifth grade.	Sixth grade.	Seventh grade.	Eighth and ninth grades.
First year's experience (cadetship)	$200	$200	$200	$200	$200	$200
Second and succeeding years of cadetship	300	300	300	300	300	300
Second year of experience, first year in charge of room	350	350	350	350	350	350
Third year of experience, second year in charge of room	400	400	400	400	400	450
Fourth year of experience, third year in charge of room	450	450	450	450	450	500
Fifth year of experience, fourth year in charge of room	475	475	475	500	500	550
Sixth year of experience, fifth year in charge of room	500	520	540	560	580	600

Class-room teachers receive the same salaries as teachers in charge of rooms of the next lower grade.

SAGINAW (EAST SIDE), MICH.

[Report of the Public Schools, 1887-89, p. 134.]

The salaries of teachers are as follows, unless otherwise specified by the board:

First year's service	$300
Second year's service	325
Third year's service	375
Fourth and subsequent years' service	400
Pupil teachers	50

Teachers holding certificates of the first grade are entitled to $25 additional to the above rates, but teachers without experience do not receive this additional amount until the second year's service. After four years' continued service for every three years further service an additional $25 may be granted to teachers holding either grade of certificate.

Substitute teachers receive $2 per day, but if the salary of the absent teacher is less than that sum the substitute receives the per diem of the absentee.

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MINNEAPOLIS, MINN.

[Fourteenth Annual Report of the Board of Education, 1890-91, p. 61.]

Rank.	First year.	Second year.	Third year.	Fourth year.	Fifth year.	Sixth year.
HIGH SCHOOLS.						
Assistant teachers	$700	$750	$800	$850	$900	$900
Teachers in charge of rooms except "A" room, containing less than 50 pupils	750	800	850	900	950	950
PRINCIPALS OF ELEMENTARY SCHOOLS.						
4-room building	650	675	700	725	750	750
6-room building	675	725	750	775	800	800
8-room building	700	750	800	850	900	900
8-room building, with grammar grade	750	800	850	900	950	1,000
10-room building	800	850	900	1,000	1,100	1,200
12-room building *a*	900	950	1,000	1,100	1,200	1,300
GRADE TEACHERS, ELEMENTARY SCHOOLS.						
In buildings of less than ten rooms:						
First grade, entering room	550	600	650	700	700	700
Other first, second, third grade rooms	400	450	500	550	600	650
Fourth and fifth grade rooms	450	500	550	600	650	700
Sixth and seventh grade rooms	500	550	600	650	700	700
Eighth-grade rooms	500	550	600	650	700	750
In buildings of ten or more rooms:						
First grade, entering room	550	600	650	700	750	750
Other first, second, third grade rooms	400	450	500	550	600	650
Fourth and fifth grade rooms	450	500	550	600	650	700
Sixth and seventh grade rooms	500	550	600	650	700	700
Eighth-grade rooms	550	600	650	700	750	800
ASSISTANTS, ELEMENTARY SCHOOLS.						
Primary assistants	350	350	350	350	350	350
Intermediate assistants	400	400	400	400	400	400
Grammar assistants	400	450	500	550	550	550

a In buildings of more than 12 rooms the salaries of principals are as directed by the board.

Substitutes receive 75 per cent of the schedule salary of the positions filled. When taken from the teachers' training school they receive $1.50 per day. The salaries of all other teachers and of the superintendent and supervisors of special work are fixed by special action of the board.

ST. PAUL, MINN.

[Compiled from the Manual of the Public Schools, 1891-92, p. 61.]

Rank.	First year.	Second year.	Third year.	Fourth year.	Fifth year.	Sixth year.
HIGH SCHOOL.						
Principal	$3,000					
Teachers of mathematics, English, and drawing	850	$1,000	$1,000	$1,100	$1,100	$1,200
Teachers of science and languages	1,000	1,200	1,400	1,600	1,800	2,000
Teachers of manual training	1,000	1,250	1,350	1,500		
TEACHERS' TRAINING SCHOOL.						
Principal	1,600					
Assistant	1,200					
Director of practice	1,250					
Instructor in primary methods	1,000					
Model teachers	850					
DISTRICT SCHOOLS.						
Principals of—						
4-room buildings	850					
6-room buildings	900	950	1,000			
8-room buildings	1,050	1,100	1,150	1,200		
10-room buildings	1,100	1,150	1,200	1,250	1,300	
12-room buildings	1,300	1,350	1,400	1,450	1,500	
14-room buildings	1,450	1,500	1,550	1,600	1,650	
16-room buildings	1,550	1,600	1,650	1,700	1,750	
18-room buildings and over	1,800	1,850	1,900	1,950	2,000	

ST. PAUL, MINN.—Continued.

Rank.	First year.	Second year.	Third year.	Fourth year.	Fifth year.	Sixth year.
DISTRICT SCHOOLS—continued.						
Teachers, eighth and seventh grades, and first primary grade in buildings of 10 or more rooms	$550	$600	$650	$700	$750	$800
Teachers, sixth to first grades, inclusive	400	450	500	550	600	650
Teachers, first primary grades in buildings of from 2 to 9 rooms	450	500	550	600	650	700
SUPERVISORS (OR SPECIAL TEACHERS).						
Penmanship, drawing, music, and manual training, each	1,000	1,200	1,400	1,600	1,800	2,000
Primary work	1,000	1,200	1,350	1,500	.....	.....
Domestic economy	1,000	1,100	1,200	.....	.....	.....
GERMAN TEACHERS.						
Supervisor	1,000	1,200	1,400	1,600	1,800	2,000
Assistant teachers	500	550	600	650	700	.....
Special teachers	800	900	1,000	.....	.....	.....
NIGHT SCHOOLS.						
Principals, per night	2½	.....	.....	.....	.....	.....
Teachers, per night	2	.....	.....	.....	.....	.....

KANSAS CITY, MO.

ELEMENTARY SCHOOLS.

Principals of schools with—	
1 assistant	$675
2 assistants	810
3 assistants	900
4 assistants	990
5 assistants	1,080
6 assistants	1,170
7 assistants	1,260
8 assistants	1,350
9 assistants	1,485
Principals of schools with—Continued.	
10 or 11 assistants	$1,530
12 or 13 assistants	1,575
14 or more assistants	1,620
Teachers:	
First year	405
Second year	450
Third year	495
Fourth year	585
Substitutes, per day	2

Salaries of other teachers are not stated.

ST. JOSEPH, MO.

[Twenty-seventh Annual Report of the Board of Public Schools, 1890-91, p. 96.]

HIGH SCHOOL.

1 principal	$2,000
3 teachers	1,500
5 teachers	1,000

ELEMENTARY SCHOOLS.

1 teacher	$1,100
11 teachers	1,000
6 teachers	800
1 teacher	650
16 teachers	600
22 teachers	550
54 teachers	500
9 teachers	405
6 teachers	360

SPECIAL TEACHERS.

1 teacher	$1,500
1 teacher	1,000
1 teacher	500

SUBSTITUTES.

10 teachers	$150

ST. LOUIS, MO.

For historical statement, see p. 000.

HELENA, MONT.

Superintendent	$3,000
HIGH SCHOOL.	
Principal	$2,000
Assistants	900
ELEMENTARY SCHOOLS.	
Teachers of—	
Eighth (highest) grade	$810
Seventh grade	765
Second grade	$765
First (lowest) grade	810
All other grades	720
SPECIAL TEACHERS.	
German, music, and writing, each from	$900 to 1,200

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OMAHA, NEBR.

Superintendent	4,000

HIGH SCHOOL.

Principal	$2,600
Assistant principal	1,800
Teachers	900 to 1,500

ELEMENTARY SCHOOLS.

Principals.	Salary.	After 5 years' service.	Principals.	Salary.	After 5 years' service.
2-room buildings	$800	$950	9-room buildings	$1,150	$1,200
3-room buildings	850	950	10-room buildings	1,200	1,250
4-room buildings	900	950	11-room buildings	1,250	1,300
5-room buildings	950	1,000	12-room buildings	1,300	1,400
6-room buildings	1,000	1,100	13-room buildings	1,350	1,400
7-room buildings	1,050	1,100	14-room buildings (or more)	1,400	.....
8-room buildings	1,100	1,150			

Teachers of highest grammar grade, $800. Other teachers, first year, $400; annual increase $50; maximum, $700.

Graduates of a high school who have attended a regular normal school for one year are credited with two years' experience.

NASHUA, N. H.

[Twenty-third Annual Report of the Board of Education, 1889, p. 55.]

	First year.	Second year.	Third year.
Superintendent	$1,500	.....	.....
High school:			
First assistant	700	$750	$700
Assistants	550	625	700
Grammar schools, assistants	400	425	450
Middle and primary schools:			
Principals	375	400	425
Assistants	350	375	400
Suburban schools, principals, per week	8	9	10

EVENING DRAWING SCHOOL.

Mechanical department:	
Principal, per evening	$7.50
Assistant, per evening	2.00
Free-hand department:	
Principal, per evening	6.50
Assistant, per evening	2.50

EVENING ELEMENTARY SCHOOL.

2 principals, per week	$10.00
1 principal, per week	7.50
Assistants, per week	5.00
Truant officer, per week	12.00

CAMDEN, N. J.

[Report of the Board of Education, 1890, p. 42.]

District principals, male	$1,675
Lady grammar school principals	1,000
Principals, secondary schools	750
Principals, boys' primary schools	575
Principals, girls' primary schools	550

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ASSISTANTS IN BOYS' SCHOOLS.

Grade.	Minimum.	Annual increase.	Maximum.
First	$350	$20.00	$430
Second	370	20.00	450
Third	400	20.00	480
Fourth	450	12.50	500
Fifth	475	12.50	525
Sixth	525	12.50	550
Seventh	625	12.50	650

ASSISTANTS IN GIRLS' SCHOOLS.

First	$320	$20.00	$400
Second	350	20.00	430
Third	370	20.00	450
Fourth	425	12.50	475
Fifth	450	12.50	500
Sixth	500	12.50	525
Seventh	600	12.50	625

JERSEY CITY, N. J.

[Twenty-third Annual Report of the Board of Education, 1889-90, page 139.]

Rank.	Less than 2 years' experience.	Two years' and less than 5 years' experience.	Five years' and less than 12 years' experience.	Maximum.
HIGH SCHOOL.				
Principal				$2,640
Vice principal				1,950
Male assistants				1,800
Female assistants				900
TRAINING SCHOOL.				
Principal				1,050
First assistant				800
Assistants	$400	$450	$576	650
GRAMMAR AND PRIMARY SCHOOLS.				
Male principal				1,950
Female principal				1,020
First assistants, grammar				800
First assistants, primary				700
Assistants	360	408	528	624
ANNEX SCHOOLS.				
Head assistants				700
Head assistants in schools having 300 or more pupils				700

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NEWARK, N. J.

[Compiled from the Thirty-fourth Annual Report of Board of Education, 1890, p. 154, and Thirty fifth Report, p. 90.]

Rank.	First year.	Maximum.
NORMAL AND TRAINING SCHOOL.		
Principal, male		$2,000
Normal department, vice principal, female		1,300
Training department:		
Vice principal, female	$700	800
Assistant, female	500	650
HIGH SCHOOL.		
Principal, male		2,500
First assistant, male	1,400	2,000
Second assistant, male	1,200	1,300
Vice principal, female		1,300
Teacher of rhetoric and composition (male department), female		1,300
First assistant, female	900	1,200
Second assistant, female	800	900
Third assistant, female	700	800
Teacher in charge of full division of senior class		1,500
Teacher in charge of German		1,500
GRAMMAR SCHOOLS.		
Principal, male		2,600
Vice principal, male	1,100	1,200
Vice principal, female	900	1,000
Head assistant, female		*a*800
First assistant, female		*a*700
Assistant, female	400	650
INTERMEDIATE SCHOOLS.		
Principalmale		$1,900
Vice principal, female	$800	900
Assistant, female	400	650
PRIMARY SCHOOLS.		
Principal, male		1,500
Principal, female (six classes and upwards)		1,000
Principal, female (less than six classes)		850
Vice principal, female	700	800
Head assistant, female		700
Assistant, female	400	600
INDUSTRIAL SCHOOLS.		
Principal, female		700
Assistant, female	400	600
COLORED SCHOOLS.		
Principal, male		1,500
Assistant, female	400	600
SPECIAL TEACHER.		
Drawing, female		1,100

a Those who teach classes of the highest grade receive $900.

EVENING SCHOOLS.	
Principals, male, per month	$60
Assistant, male or female, per month	40 and 45

SUBSTITUTES.	
Grammar and primary schools, per day	$1.50
High schools, per day	2.50

PATERSON, N. J.

[Compiled from the Annual Report of the Board of Education, 1890-91, page 119.]

Superintendent, male	$2,000
HIGH AND NORMAL SCHOOLS.	
Principals, male	$1,800
Assistants, high school, female	750
Assistants, normal school, female	800
GRAMMAR SCHOOLS.	
2 principals, male	$1,500
6 principals, male	1,200
1 assistant principal, female	800
Head assistants, female	650
Assistants, female—	
First six months	500
Maximum	550
PRIMARY SCHOOLS.	
1 principal, male	$850
4 principals, male	1,200
PRIMARY SCHOOLS—continued.	
1 principal, female	$700
Head assistants, first grade, female	550
Assistants, below first grade, female—	
First year	375
Second year	375
Third year	400
Fourth year	425
Fifth year	450
Maximum	500
Assistants, kindergarten, female—	
First year	375
Second year	375
Third year	400
Fourth year	425
Fifth year	450
Maximum	550
SPECIAL TEACHERS.	
Instructor in training shop, male	$1,000
Instructor in drawing, female	1,000

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TRENTON, N. J.

[Annual Report of the Board of Education, 1890-91, p. 125.]

Rank.	First year.	Second year.	Third year.	Fourth year.	Maximum.
HIGH SCHOOL.					
Principal, male					$1,800
Vice-principal, female					700
Head assistant, female					650
First assistant, female					600
Second assistant, female					550
GRAMMAR SCHOOLS.					
Principal, male					1,500
Principal, female					750
Vice-principal, female					600
Head assistant, female					600
Assistant, female	$350	$400	$400	$450	500
PRIMARY SCHOOLS.					
Principal, female					650
Assistant, female	350	400	400	400	450
Auxiliaries					250
COLORED SCHOOL.					
Principal, male					1,200
Assistant, female	350	400	400	450	500

EVENING SCHOOLS.

Teacher high school, per week	$9, 10, 15
Principal, grammar school, female, per week	9.00
Assistant, grammar school, female, per week	7.50

ALBANY, N. Y.

[Compiled from the Twenty-fourth Annual Report of the Board of Public Instruction, 1889-90, p. 190.]

Superintendent	$3,000
HIGH SCHOOL.	
Principal	$3,000
Vice-principal and professor of Latin and Greek	2,500
Professor of mathematics	2,160
Professor of natural sciences	2,000
Professor of English literature	1,800
Classical assistant and teacher of elocution (who is also librarian)	1,350
Teacher of rhetoric and elocution	800
Assistant teacher of natural sciences	700
Teacher of history and English branches	700
First assistant teacher of mathematics	800
Second assistant teacher of mathematics	700
Third assistant teacher of mathematics	600
First assistant teacher of Latin	750
Second assistant teacher of Latin	700
Third assistant teacher of Latin	600
First assistant teacher of English literature	700
Second assistant teacher of English literature	600
Third assistant teacher of English literature	600
Fourth assistant teacher of English literature	400
Professor of German	750
HIGH SCHOOL—Continued.	
Teacher of French and German	$250
Teacher of manual training (boys)	800
Teacher of manual training (girls)	600
GRAMMAR AND PRIMARY SCHOOLS.	
10 principals, male	$1,800
2 principals, male	1,600
1 principal, female	1,200
4 principals, female	800
4 principals, female	700
Principals' assistants and teachers of ninth-year class, and one first assistant	600
Teachers of seventh and eighth year classes (after four years' service), and two principals' assistants	550
Assistant teachers:	
First year	350
Second year	400
Third year	450
Fourth year	500
SPECIAL TEACHERS.	
Drawing master	$1,600
Director of music	1,200
Teacher of music (high and training schools)	900

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BROOKLYN, N. Y.

[Compiled from the 33th Annual Report of the Superintendent of Public Instruction, 1890, pp. 241 to 249.]

Rank.	First year.	Annual increase.	Maximum.
Principal of—			
Girls' high school	$5,000		
Boys' high school	3,000		
Training school	4,000		
Grammar schools	2,500	$100	$3,000
Intermediate schools	1,800	200	2,200
Primary schools	1,200	150	1,500
Heads of departments	1,000	50	1,250
GRAMMAR SCHOOLS.			
Teachers of first (highest) grade—			
Boys' classes, male	1,200		
Boys' classes, female	950	50	1,200
Girls' classes, female	950	50	1,200
Teachers of second grade—			
Boys' classes, male	1,050		
Boys' classes, female	900	50	1,050
Girls' classes, male	850	50	1,000
Teachers of third grade—			
Boys' classes, male or female	900		
Girls' classes, male or female	850		
Teachers of fourth grade—			
Boys' classes, male or female	800		
Girls' classes, male or female	750		
Teachers of fifth grade—			
Boys' classes, male or female	725		
Girls' classes, male or female	675		
Teachers of sixth grade—			
Boys' classes, male or female	650		
Girls' classes, male or female	600		
Teachers of seventh grade—			
Boys' classes, male	650		
Boys' classes, female	600	50	650
Girls' classes, female	550	50	600
Teachers of eighth grade—			
Boys' classes, male	650		
Boys' classes, female	550	50	650
Girls' classes, female	500	50	600
PRIMARY SCHOOLS.			
Teachers of first (highest) grade—			
Boys' classes, female	325	50	575
Girls' classes, female	300	50	550
Teachers of second grade—			
Boys' classes, female	325	50	575
Girls' classes, female	300	50	550
Teachers of third to sixth grades, inclusive—			
Boys' classes, female	325	50	525
Girls' classes, female	300	50	500
Teachers of seventh grade—			
Boys' classes, female	450	50	550
Girls' classes, female	475	50	575

The entire elementary course covers seven and a half years, the time being divided into eight grammar and seven primary grades of a half year each. All primary schools are call d "branch schools," and are under the direction of the principals of the grammar schools to which they are attached. Their principals are styled "branch principals." Salaries of other teachers are not stated.

BUFFALO, N. Y.

[Compiled from the Annual Report of the Superintendent of Education, 1889-90, pp. 170-195.]

HIGH SCHOOL.		HIGH SCHOOL—continued.	
1 principal, male	$2,250	3 assistants, female	$850
5 teachers, male	1,600	2 assistants, female	800
2 teachers, male	1,200	3 assistants female	700
2 subprincipals, female	1,300	3 assistants, female	650
1 assistant, female	1,100	1 assistant, female	450

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BUFFALO, N. Y.—Continued.

ELEMENTARY SCHOOLS.

23 principals, male	$1,000
3 principals, male	1,550
5 principals, male	1,500
2 principals, male	1,400
2 principals, male	1,200
1 principal, male	1,000
2 principals, male	850
1 principal, male	800
2 principals, female	1,200
1 principal, female	1,100
2 principals, female	900
1 principal, female	850
1 principal, female	800
Assistant principals, female	850
Assistant principals, female	700
Department principals, female	850
Department principals, female	750
Department principals, female	700
Department principals, female	600
Assistants, female	*a* 600
Assistants, female	570
Assistants, female	500
Assistants, female	450
Assistants, female	400

SCHOOL OF PRACTICE.

1 principal, female	700
5 assistants, female	700
1 assistant, female	$650
1 assistant, female	450

SCHOOLS IN CHARITABLE INSTITUTIONS.*b*

3 principals	760
1 principal, female	600
1 principal, female	450
2 assistants, female	600
1 assistant, female	570
1 assistant, female	500

KINDERGARTEN.

1 principal (female)	$450

SPECIAL TEACHERS.

Music, 1 male principal	$1,600
Music, 1 male assistant	1,500
Penmanship, 1 male principal	1,600
Penmanship, 1 male assistant	1,500
Drawing, 1 female teacher	700
Drawing, 1 female teacher	650
German, 13 female teachers	600
German, 4 female teachers	570
German, 5 female teachers	500
German, 4 female teachers	450
German, 3 female teachers	400

a This seems to be the salary of experienced assistants, since nearly all on the list received it
b All but two of these teachers are members of religious orders.

NEW YORK, N. Y.

[Forty-ninth Annual Report of the Board of Education, 1890, p. 21.]

MALE DEPARTMENTS OF GRAMMAR SCHOOLS.

60 principals, male	$3,000
13 principals, male	2,750
7 principals, male	2,500
2 principals, male	2,250
18 vice-principals, male, average	2,004
167 assistants, male, average	1,521
643 assistants, female, average	793

FEMALE DEPARTMENTS OF GRAMMAR SCHOOLS.

33 principals, female	1,900
7 principals, female	1,700
6 principals, female	1,600
2 principals, female	1,500
22 vice-principals, female, average	1,173
656 assistants, female, average	742

PRIMARY DEPARTMENTS AND SCHOOLS.

75 principals, female	$1,750
11 principals, female	1,700
4 principals, female	1,600
10 principals, female	1,500
5 principals, female	1,400
5 principals, female	1,300
4 principals, female	1,100
6 principals, female	1,000
42 vice-principals, female, average	1,014
1,671 assistants, female, average	623

SCHEDULE OF SALARIES.

[Compiled from the Manual of the Board of Education, 1892, pp. 154-163, 238, 284.]

MALE AND MIXED GRAMMAR SCHOOLS.

Principals in schools having an average attendance of—	
150 or less	$2,250
151 to 300	2,500
301 to 500	2,750
501 and upwards	3,000
Vice-principals in schools having an average attendance of a grammar grade of—	
250 or less	1,800
251 and upwards	2,016
Male assistant teachers:	
First-class assistants	$2,016
Second-class assistants	1,728
Third-class assistants	1,656
Fourth-class assistants	1,476
Fifth-class assistants	1,332
Sixth-class assistants	1,260
Seventh-class assistants	1,080

Where five male assistants are employed, there is allowed one salary each of the first, second, fourth, sixth, and seventh class.

Where four are employed, one each of the first, third, fifth, and seventh class.

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Where three are employed, one each of the second, fourth, and sixth class.
Where two are employed, one each of the second and fifth class.
Where one is employed, one of the second class.

Female assistants in male grammar schools:	
First-class assistants	$1,116
Second-class assistants	1,020
Third-class assistants	933
Fourth-class assistants	855
Fifth-class assistants	786
Sixth-class assistants	726
Seventh-class assistants	675
Eighth-class assistants	633

Female assistants in mixed grammar schools:	
First-class assistants	$1,086
Second-class assistants	990
Third-class assistants	903
Fourth-class assistants	825
Fifth-class assistants	756
Sixth-class assistants	696
Seventh-class assistants	645
Eighth-class assistants	603

[See explanation of method of assigning salaries at the end of the schedule for female grammar schools.]

FEMALE GRAMMAR SCHOOLS.

Principals in schools having an average attendance of—	
100 or less	$1,200
101 to 150	1,300
151 to 300	1,500
301 to 500	1,600
501 and upwards	1,700
Vice-principals in schools having an average attendance of a grammar grade of—	
250 or less	1,000
251 and upwards	1,200

Female assistants:	
First-class assistants	$1,056
Second-class assistants	960
Third-class assistants	873
Fourth-class assistants	795
Fifth-class assistants	726
Sixth-class assistants	666
Seventh-class assistants	615
Eighth-class assistants	573

Where eight female assistants are employed in any grammar school there is allowed one of each class of male, mixed, or female grammar salaries, as the case may be.

Where more than eight are employed, there is added one salary of each class of similar salaries, beginning with the lowest, and repeating, if necessary, until the required number is reached. But there is not allowed to any grammar school more than one salary of the first or second class, two of the third class, three of the fourth class, four of the fifth class, five of the sixth class, or six of the seventh class.

Where less than eight are employed, there is deducted one salary of each highest and lowest class alternately, beginning with the lowest, until the required number is reached.

Female first assistants who teach the first grammar grades alone or in connection with other grades in mixed grammar schools where boys and girls are instructed in the same class, and where no male assistant is employed, and where the average attendance exceeds one hundred and fifty, are not counted under the foregoing provisions, and they are paid a special salary of $1,440.

PRIMARY SCHOOLS.

Principals in schools having an average attendance of—	
200 or less	$1,000
201 to 400	1,100
401 to 500	1,300
501 to 600	1,400
601 to 850	1,500
851 to 1,000	1,600
1,001 and upwards	1,700
Vice principals in schools having an average attendance of—	
Less than 325	850
325 to 500	900
501 to 1,000	1,000
1,001 and upwards	1,200

Female assistants:	
First-class assistants	$900
Second-class assistants	834
Third-class assistants	774
Fourth-class assistants	720
Fifth-class assistants	672
Sixth-class assistants	630
Seventh-class assistants	594
Eighth-class assistants	564
Ninth-class assistants	540
Tenth-class assistants	522
Eleventh-class assistants	510
Twelfth-class assistants	504

Where twelve assistants are employed, there is allowed one of each class of primary salaries.

Where more than twelve are employed, there are allowed additional primary salaries in the same manner as in the grammar schools. But there are not allowed to any primary department or school more than one salary of the first, second, third, or fourth class, two of the fifth or sixth class, three of the seventh or eighth class, four of the ninth or tenth class, or five of the eleventh class.

When less than twelve and more than five are employed, there is deducted

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one salary of each of the highest and lowest of the evenly numbered classes alternately, beginning with the lowest until the required number is reached.

Where less than six are employed, there is allowed one salary of each alternate class, beginning in each school with the class next below the highest class allowed in a school of the next larger size and proceeding until the required number is reached.

TEACHERS OF LONG EXPERIENCE.

Principals who have been so employed for fourteen years, and whose record for five years preceding the application has been meritorious and uniformly excellent, may be paid not less than the following annual salaries:

Principals of male and mixed departments	$3,000
Principals of female departments	1,900
Principals of primary departments and schools	1,750

Assistant teachers whose services have been meritorious and extending over a period of fourteen years receive not less than $750 per annum.

INEXPERIENCED TEACHERS AND SUBSTITUTES.

Assistant teachers of less than one year's experience are known as junior teachers, and are paid for the first year's service: Males, $720 per annum; females, $408 per annum; and on the expiration of the year's service they cease to be considered as junior teachers, and are entitled, as assistant teachers, to the salaries prescribed in the preceding sections.

Substitute teachers are paid $1.20 per day.

SPECIAL TEACHERS.

No salary paid to a teacher of vocal music in a grammar or primary school, or to a teacher of French or German in a grammar school may exceed $1.50 per hour for the time actually employed in instruction. No salary paid to a teacher of drawing in a grammar school may exceed $2 per hour.

EVENING SCHOOLS.

	Per night.		Per night.
Principals, high schools	$8.50	Male assistants, elementary, schools	$3.00
Assistants, high schools	5.00	Female principals, elementary schools	3.50
Male principals, elementary schools	4.50	Female assistants, elementary schools	2.50

ROCHESTER, N. Y.

[Compiled from the Forty-third Annual Report of the Board of Education, 1889-90, p. 159-187.]

FREE ACADEMY.

1 principal, male	$2,200
1 teacher, male	1,800
1 teacher, male	1,050
1 teacher, male	1,400
1 teacher, male	1,250
8 teachers, female	900
2 teachers, female	750
2 teachers, female	700
1 teacher, female	650
2 teachers, female	600
1 assistant, female	400

ELEMENTARY SCHOOLS.

7 principals, male	1,500
2 principals, male	1,400
2 principals, male	1,300
1 principal, male	1,000
1 principal, female	1,250

ELEMENTARY SCHOOLS—continued.

1 principal, female	$1,200
1 principal, female	1,050
2 principals, female	800
7 principals, female	750
1 principal, female	700
2 principals, female	650
2 principals, female	600
3 principals, female	550
227 assistants, female	450
78 assistants, female	400
59 assistants, female	350
20 assistants, female	300
10 assistants, female	250

KINDERGARTENS.

1 principal, female	500
5 principals, female	450
10 principals, female	350

The salaries of other teachers are not stated.

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SYRACUSE, N. Y.

[Compiled from the Forty-second Annual Report of the Board of Education, 1889-90, p. 130.]

HIGH SCHOOL.

1 principal, male	$2,500
1 teacher, male	2,000
1 teacher, male	1,400
1 teacher, male	1,200
1 teacher, male	1,150
1 teacher, male	1,100
2 teachers, female	800
2 teachers, female	700
1 teacher, female	650
4 teachers, female	600
1 teacher, female	550
1 teacher, female	500
1 teacher, female	350

ELEMENTARY SCHOOLS.

8 principals, male	1,600
9 principals, female	850
4 principals, female	800

ELEMENTARY SCHOOLS—continued.

17 principals, female	$600
136 assistants, female	500
28 assistants, female	450
24 assistants, female	400
18 assistants, female	350
12 assistants, female	300

SCHOOLS IN ORPHAN ASYLUMS.

2 principals, female	500
3 assistants, female	500
1 assistant, female	300

SPECIAL TEACHERS.

Penmanship, male	1,500
Music, male	1,300
Drawing, female	900
Training class, female	1,000

TROY, N. Y.

[Compiled from the Manual of the Board of School Commissioners, 1890-91, p. 65.]

HIGH SCHOOL.

Principal	$2,200
First assistant, male	1,700
Second assistant, male	1,300
Third assistant, male	1,000
First assistant, female	$775
Second assistant, female	750
Third assistant, female	759

GRAMMAR SCHOOLS.

Rank.	Salary first year.	Annual increase.	Maximum.
6 principals	$1,600	.....	.....
1 principal (mixed school)	650	$50	$750
First assistants	500	50	700
1 first assistant (mixed school)	450	50	650
Assistants	350	50	600

INTERMEDIATE AND PRIMARY SCHOOLS.

1 principal	$1,200	.....	.....
1 principal	1,000	.....	.....
1 principal	850	.....	.....
All other principals	550	$50	$750
First assistants	425	50	625
Assistants	350	50	600

Special teacher of music, $1,500; of drawing, $800.

YONKERS, N. Y.

[Compiled from the Ninth Annual Report of the Board of Education, 1888-89, p. 52.]

HIGH SCHOOL.

1 principal, male	$2,200
1 teacher, male	1,350
1 teacher, male	1,000
1 teacher, male	500
1 teacher, female	1,200

ELEMENTARY SCHOOLS.

2 principals, female	$1,450
1 principal, female	900
2 principals, female	700
1 principal, male	700
1 principal, female	600
3 assistants, female	1,000
1 assistant, female	900
1 assistant, female	800
3 assistants, female	775

ELEMENTARY SCHOOLS—continued.

2 assistants, female	$750
3 assistants, female	725
2 assistants, female	700
4 assistants, female	675
6 assistants, female	650
3 assistants, female	625
8 assistants, female	600
5 assistants, female	550
2 assistants, female	525
2 assistants, female	500
2 assistants, female	450

SPECIAL TEACHERS.

Music, female	$800
Drawing, female	800

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CINCINNATI, OHIO.

For historical statement see pages 683-693.

COLUMBUS, OHIO.

[Annual Report of the Board of Education, 1889-90, p. 403.]

Superintendent	$3,000
NORMAL SCHOOL.	
Principal	$1,600
Training teachers	1,000
HIGH SCHOOL.	
Principal	$2,400
Special teachers	1,700
Other teachers:	
Minimum	1,000
Annual increase	100
Maximum	1,500
ELEMENTARY SCHOOLS.	
Principals of 10 or more rooms (not required to teach)	$1,000
Principals of 8 to 10 rooms (required to teach)	1,000
ELEMENTARY SCHOOLS—continued.	
Principals of less than 8 rooms (required to teach)	$800
Teachers of highest grammar grade	700
Other teachers:	
Minimum	400
Annual increase	50
Maximum	600
EVENING SCHOOLS.	
Principals of 5 rooms or more (not required to teach), per evening	$2.25
Principals of less than 5 rooms (required to teach), per evening	2.25
Teachers, per evening	1.80
SPECIAL TEACHERS.	
Music	$2,000
Drawing	2,000

DAYTON, OHIO.

[Compiled from the Annual Report of the Board of Education, 1888-89, pp. 148-151.]

Superintendent	$2,500
NORMAL SCHOOL.	
1 principal, female	$1,500
1 critic teacher, female	1,000
HIGH SCHOOL.	
1 principal, male	$2,000
1 teacher, male	1,500
4 teachers, male	1,200
5 teachers, female	1,200
DISTRICT SCHOOLS.	
1 principal, male	$1,800
5 principals, male	1,500
1 principal, female	1,600
4 principals, female	1,500
DISTRICT SCHOOLS—continued.	
1 principal, female	$1,200
11 first assistants, female	800
1 first assistant, female	700
1 assistant, female	900
2 assistants, female	800
2 assistants, male	750
5 assistants, female	650
27 assistants, female	600
67 assistants, female	550
17 assistants, female	500
30 assistants, female	450
SPECIAL TEACHERS.	
Music, male	$1,200
Drawing, male	1,200
Writing, male	1,200

SPRINGFIELD, OHIO.

[Compiled from the Reports of the Public Schools, 1888-90, p. 87.]

Superintendent	$2,000
HIGH SCHOOL.	
Principal, male	$1,300
3 teachers, male	1,000
2 teachers, female	800
ELEMENTARY SCHOOLS.	
2 principals, male	$1,100
2 principals, male	1,050
3 principals, male	1,000
2 principals, male	850
1 principal, male	650
1 principal, male	600
1 principal, male	500
1 principal, female	350
1 principal, female	300
1 teacher, male	900
ELEMENTARY SCHOOLS—continued.	
1 teacher, male	$500
2 teachers, female	800
10 teachers, female	600
11 teachers, female	550
29 teachers, female	500
13 teachers, female	450
8 teachers, female	400
11 teachers, female	350
10 teachers, female	300
2 teachers, female	250
1 teacher, female	200
2 teachers, female	150
SPECIAL TEACHERS.	
Music, male	$1,200
Drawing, female	1,200
Writing, female	1,200

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PORTLAND, OREGON.

[Rules and Regulations of the Public Schools, 1890, pp. 14 and 15.]

Position.	First year, minimum.	Second year.	Third year.	Fourth year.	Maximum.
City superintendent	$2,000				$2,500
Drawing teacher					1,200
Singing teacher	900				
Principal of high school	2,000				2,500
Assistant, high school	1,600	$1,100	$1,200		1,200
Principal of grammar school	1,500	1,600	1,700	$1,800	1,800
Principal's assistant in grammar school	900	1,000	1,100	1,200	1,200
Seventh grade	750	800	850	900	900
Sixth grade	700	750	800	850	850
Fifth grade	650	700	750	800	800
Fourth grade	600	650	700	750	750
Third grade	600	650	700	750	750
Second grade	600	650	700	750	750
First grade (lowest)	700	750	800	850	850
Principal Lownsdale primary	900				1,000
Teacher in Ainsworth school					850

Substitutes receive $2.25 per day for teaching primary grades, $2.75 for grammar grades, and $4 for the high-school grades.

ALLEGHENY, PA.

[Compiled from the Thirty-sixth Annual Report of the Board of Controllers, 1889-90, p. 147.]

Superintendent	$2,200
HIGH SCHOOL.	
Principal	$1,700
Head teachers	1,000
Assistant teachers	650
ELEMENTARY SCHOOLS.	
Principals of—	
15 or more rooms	$1,300
10 to 15 rooms	1,400
5 to 10 rooms	1,300
Less than 5 rooms	1,000
Teachers of grammar grades:	
First year	550
Second and third years	580
After third year	600
ELEMENTARY SCHOOLS—continued.	
Teachers of primary grades:	
First year	$350
Second and third years	420
Fourth and fifth years	450
After fifth year	550
EVENING SCHOOLS.	
Principals, per month	$40
Assistants, do	30
SPECIAL TEACHERS.	
Music, 2 males	$1,000
Drawing, 1 female	800

Substitutes receive the salary of the absentees whose places they fill.

PHILADELPHIA, PA.

[Compiled from the Seventy-second Annual Report of the Board of Public Education, 1890, pp. 384-388.]

Superintendent	$5,000
6 assistant superintendents	2,500
CENTRAL HIGH SCHOOL.	
President	$4,000
15 professors	2,178
1 instructor	1,800
3 instructors	720
2 instructors	700
GIRLS' NORMAL SCHOOL.	
Principal	$3,000
Principal of school of practice	1,500
Professor of natural science	2,100
Teacher of methods	1,500
Teacher of philosophy and methods of kindergarten	1,100
GIRLS' NORMAL SCHOOL—continued.	
8 teachers, female	$1,100
8 teachers, female	1,000
16 teachers, female	900
2 teachers of cooking, female	800
2 assistants, school of practice, female	750
1 assistant to principal, female	750
3 teachers of kindergarten, female	450
MANUAL TRAINING SCHOOLS.	
Principal, male	$2,700
1 teacher, male	2,178
4 teachers, male	1,800
4 teachers, male	1,400
5 teachers, male	1,200
4 teachers, male	1,000

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PHILADELPHIA, PA.—Continued.

KINDERGARTENS.

Principals employed one session daily in kindergartens of 1 class:	
First year	$350
Second year	375
After second year	400
Principals employed one session daily in kindergartens of 2 or more classes:	
First year	375
Second year	400
After second year	425
Assistants employed one session daily in kindergartens of 2 or more classes:	
First year	300
Second year	325
After second year	350

KINDERGARTENS—continued.

Principals or assistants employed for both sessions daily:	
First year	$420
Second year	450
Third year	480
Fourth year	510
Fifth year	540
After fifth year	570

SEWING.

Teachers, female:	
First year	$360
Second year	525
Third year	550
After third year	570

ELEMENTARY SCHOOLS.

Principals of boys' grammar schools, $1,755 to $1,815 per annum, according to previous experience.

Principals of girls' grammar schools, $1,140 to $1,200, according to previous experience.

Principals of secondary schools, $610 to $700, according to previous experience.

Principals of primary schools, $530 to $650, according to previous experience.

Supervising principals of schools containing grammar and lower grades, $200 per annum additional.

Supervising principals of schools containing secondary grades only, primary grades only, or both primary and secondary grades, $250 per annum additional.

Principals of consolidated schools in accordance with the number of divisions in the schools. Maximum (10 divisions or over), $1,595.

Assistants in secondary and primary schools, $420 for the first year, with an increase of $30 per annum for five years. Maximum, $570.

Assistants in grammar schools, $470 for the first year, with an increase of $30 per annum for five years. Maximum, $620.

First assistants and assistants in charge of the highest grammar grades, $620 for the first year, with an increase of $30 per annum for five years. Maximum, $770.

Teachers having two years' actual experience and teaching the first grade receive $40 additional.

PITTSBURG, PA.

[Twenty-third Annual Report of the Superintendent of Public Schools, 1890-91, p. 91.]

Superintendent	$3,500

HIGH SCHOOL.

Principal	$2,500
Professor of mathematics	1,700
Professor of geology and chemistry	1,700
Professor of Latin and Greek	1,700
Professor of elocution	1,400
Assistant professor of sciences	1,400
Professor of belles lettres	1,700
Professor of biology	1,700
Professor of physics	1,700
Assistant professor of mathematics	1,200
2 teachers of drawing	800
2 preceptresses	900
5 preceptresses	800
Head of commercial department	1,700
Professor of theory of accounts	1,200
1 assistant (commercial department)	700
1 assistant (commercial department)	500
Head of normal department	1,700
1 assistant (normal department)	1,000
1 assistant (normal department)	900
1 assistant (normal department)	800
Training teacher	800

ELEMENTARY SCHOOLS.

Principals of schools requiring—	
Over 30 teachers	$2,000
21 to 30 teachers	1,800
15 to 20 teachers	1,600
6 to 14 teachers	1,500
3 to 5 teachers	$1,200
Less than 3 teachers	800
Assistant principals	800
Grammar teachers:	
First year	600
Second year	650
Primary teachers:	
First year	350
Second year	400
Third year	450
Fourth year	500
Fifth year	550
Sixth year	600
Teachers in charge of first-year pupils:	
First year	350
Second year	400
Third year	450
Fourth year	550
Fifth year	600
Sixth year	650

ELEMENTARY SCHOOLS—continued.

SPECIAL TEACHERS.

Writing and drawing:	
First year	$450
Second year	500
Third year	500
Fourth year	555
Fifth year	600
Music, 2 males	1,500
Cooking, 1 female	1,000

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READING, PA.

[Manual and Directory of the Public Schools, 1889-90, p. 20.]

BOYS' HIGH SCHOOL.

Principal	$1,500
Assistants	900, 1,000, and 1,100

GIRLS' HIGH SCHOOL.

Principal	$1,000
Assistants	550, 600, 700, 750, 800

GRAMMAR SCHOOLS.

Advanced grades	$600
Male teachers	500
Female teachers	450

SECONDARY SCHOOLS.

Principals, male	$360
Principals, female	340
Assistants, male	330
Assistants, female	320

PRIMARY SCHOOLS.

Principals	$320
Assistants	260

PROVIDENCE, R. I.

Maximum salaries fixed by city ordinance:

City superintendent	$3,500

HIGH SCHOOL.

Principal	$2,500
First assistant, English and scientific department	1,900
Second assistant, English and scientific department	1,100
Third assistant, English and scientific department	1,100
Fourth assistant, English and scientific department	900
Principal, classical department	2,100
First assistant, classical department	1,600
Second assistant, classical department	1,400
Third assistant, classical department	1,100
Fourth assistant, classical department	800
Principal, girls' department	1,800
Assistant teacher, first class of girls	800
Teacher, second class of girls	1,000
Assistant teacher, second class of girls	750
2 teachers, third class of girls	900
8 teachers, fourth class of girls	750
Other assistant teachers, girls' department	600
Teacher of French	600
Assistant teacher in laboratory	300

ELEMENTARY SCHOOLS.

9 principals, grammar schools	$1,900
2 principals, grammar schools	700
Assistant teachers, first (highest) grade, grammar schools	700
Assistant teachers, second grade, grammar schools	625
Assistant teachers, other grades, grammar schools	575
Principal teachers, intermediate schools	550
Assistant teachers, intermediate schools	525
Principal teachers, primary schools	525
Critic teachers, grammar grade	800
Assistant teachers, primary schools:	
First year	350
Second year	450
Third year	450
Fourth year	500
Critic teachers, primary schools (in addition to salary as regular teacher)	100

SPECIAL TEACHERS.

Music, principal	$1,700
Music, assistants	700
Sewing teachers	500

The following rules are added by the Board of Education:

"Assistant teachers shall be paid for their first year of service in our public schools, $350; for their second year, $450; for their third year, $500; for their fourth year, $525; for their fifth year, $575; for their sixth year, $625; for their seventh and subsequent years, $700; provided that their pay shall not exceed the maximum allowed to the grade in which they are instructing. *a*

"Pupil-teachers shall receive $200 per annum.

"Principals shall receive $25 per annum in addition to the pay to which they would be entitled as assistants."

Substitutes employed less than twenty days receive $1 per day if the salary of the absentee be $200, $1.25 per day if $350, $1.50 if between $350 and $575, $1.75 if $575, and $2 if $600 or more.

Substitutes employed twenty or more consecutive days in the same position shall receive the same pay to which they would be entitled if appointed to that position, but such salary shall not exceed that of the absentees whose places they fill.—[Compiled from the Manual of the Public Schools, September, 1888, pp. 123-129.

a Assistant teachers in primary grades are paid $450 for their third year, and $500 for their fourth and subsequent years.

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CHARLESTON, S. C.

[From manuscript report, 1892.]

Superintendent	$2,000
HIGH SCHOOL.	
Teacher of mathematics	$675
Teacher of physics	540
Teacher of belles lettres	525
Teacher of history	500
Teacher in charge of junior department	425
Teacher of elocution	400
ELEMENTARY SCHOOLS.	
Male principals	$1,500
ELEMENTARY SCHOOLS—continued.	
Female principals	$1,325
Principals of departments	700
Teachers:	
First grade	540
Second grade	450
Third grade	360
SPECIAL TEACHERS.	
Vocal music	$900
Drawing	500

MEMPHIS, TENN.

ELEMENTARY SCHOOLS.	
Principals:	
First and second years	$720
Third and fourth years	810
After fourth year	1,000
Assistants:	
First and second years	360
Third and fourth years	450
After fourth year	540
SPECIAL TEACHERS.	
Elocution	$810
Music	675
Drawing	675
Superintendent	2,400
High-school teachers	720 to 900

NASHVILLE, TENN.

[Compiled from the Annual Report of the Board of Education, 1888-89, pp. 54-57.]

HIGH SCHOOL.	
1 principal, male	$2,000
1 professor of classics (also floor principal) male	1,800
1 professor of physics, male	1,000
1 professor of mathematics, male	900
1 floor principal, female	1,100
1 professor of history	1,000
1 teacher, female	700
2 teachers, female	650
ELEMENTARY SCHOOLS.	
1 principal, male	1,800
2 principals, male	1,500
1 principal, male	1,400
2 principals, male	1,200
1 principal, male	850
2 floor principals, female	850
6 floor principals, female	700
2 floor principals, female	600
1 grade teacher, female	850
1 grade teacher, female	700
1 grade teacher, female	650
5 grade teachers, female	600
14 grade teachers female	550
34 grade teachers, female	$500
9 grade teachers, female	450
5 grade teachers, female	400
12 grade teachers, female	350
COLORED SCHOOLS.	
1 principal, male	1,100
2 principals, male	900
1 principal, male	650
1 floor principal, male	600
1 grade teacher, male	850
1 grade teacher, male	600
3 grade teachers, male	500
2 grade teachers, male	450
9 grade teachers, male	400
2 grade teachers, male	350
1 floor principal, female	700
2 grade teachers, female	500
3 grade teachers, female	450
4 grade teachers, female	400
3 grade teachers, female	350
SPECIAL TEACHERS.	
Vocal music, male	1,200
Penmanship and drawing	1,200

DALLAS, TEX.

[Compiled from the Sixth Annual Report of the Board of Directors, 1889-90, p. 10.]

HIGH SCHOOL.	
1 principal	$1,350
3 teachers, male	990
1 teacher, male	630
1 teacher, female	1,080
1 teacher, female	990
5 teachers, female	675
5 teachers, female	540
1 teacher, female	360
ELEMENTARY SCHOOLS.	
1 principal, male	1,125
2 principals, male	1,080
1 principal, male	810
3 principals, male	765
1 assistant, male	675
1 assistant, male	630
ELEMENTARY SCHOOLS—continued.	
1 assistant, male	$540
8 assistants, female	675
23 assistants, female	540
SUBSTITUTES.	
1 male, high school	90
2 females, elementary schools	90
COLORED SCHOOLS.	
3 principals, male	630
2 principals, male	540
1 principal, male	495
1 assistant, male	540
1 assistant, female	540
1 assistant, female	495
2 assistants, female	450

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SALT LAKE CITY, UTAH.

[From manuscript report 1892.]

Superintendent	$3,000
HIGH SCHOOL.	
Principal	1,800
2 assistants	1,400
1 assistant	1,000
1 assistant	900
ELEMENTARY SCHOOLS.	
8 principals	1,250
2 principals	1,100
4 principals	1,000
1 principal	900
2 principals	850
ELEMENTARY SCHOOLS—continued.	
5 principals	$800
1 principal	750
2 teachers	900
13 teachers	750
21 teachers	700
36 teachers	650
12 teachers	600
10 teachers	500
SPECIAL TEACHERS.	
1 supervisor of drawing	1,250
1 teacher of music	1,150
1 assistant teacher of music	800

RICHMOND, VA.

[Compiled from the Twenty-second Annual Report of the Superintendent of Public Schools, 1890-91, pp. 83 and 38.]

HIGH SCHOOLS.	
2 principals, male	$1,500
1 assistant principal	792
1 teacher	675
1 assistant principal	630
1 teacher, German	450
25 assistants	540
DISTRICT SCHOOLS.	
13 principals, male	1,350
2 principals, male	792
35 teachers of first (highest) grammar grade	495
51 teachers of second and third grammar grades	450
17 teachers of first (highest) primary grade	432
22 teachers of second, third, and fourth primary grades	405
DISTRICT SCHOOLS—continued.	
6 teachers of double schools	$540
30 teachers for first year's service	297
26 teachers for second year's service	360
NIGHT SCHOOLS.	
Principals.....per month	20
Principals (teaching a night school), per month, extra	5
Teachers.....per month	20
SUBSTITUTES.	
When teaching less than five consecutive days in the same school $1 per day; for five consecutive days in the same school $7. No substitute may receive more than $30 in any one month.	

TACOMA, WASH.

[Compiled from the Third Annual Report of the Public Schools, 1890-91, pp. 87 and 91.]

HIGH SCHOOL.	
1 principal, male	$2,000
4 assistants, female	950
2 assistants, female	900
1 assistant, female	850
ELEMENTARY SCHOOLS.	
2 principals, male	1,560
1 principal, female	1,500
1 principal, male	1,300
1 principal, male	1,200
1 principal, female	1,200
ELEMENTARY SCHOOLS—continued.	
2 principals, male	$1,100
1 principal, female	1,100
25 teachers, female	850
20 teachers, female	800
18 teachers, female	750
14 teachers, female	700
17 teachers, female	650
SPECIAL TEACHERS.	
Reading, 1 female	1,000
Drawing, 1 female	850

The salaries of grammar and primary teachers are adjusted as follows: A teacher of little or no experience receives the first year $650; for the second year, $700; for the third year, $750; for the fourth year, $800; and $850 for the fifth year of service with us. A teacher of long and favorable experience in schools of acknowledged efficiency receives $750 the first year, receiving the maximum salary, $850, the third year.

MILWAUKEE, WIS.

[Compiled from the Thirtieth Annual Report of the School Board, 1888-89, appendix, pp. 8 and 41.]

Superintendent	$3,250
Assistant superintendent	
HIGH SCHOOL.	
1 principal, male	$3,000
1 vice-principal, male	2,000
1 teacher of literature, male	1,700
1 teacher of Latin, male	1,400
1 teacher of English and Latin, male	1,600
1 teacher of German, female	1,100
1 assistant, female	1,000
HIGH SCHOOL—continued.	
1 assistant, female	$900
3 assistants, female	800
2 assistants, female	700
SPECIAL TEACHERS.	
1 director of German, male	$2,000
1 director of drawing, male	1,700
1 director of music, male	1,500
1 director of cooking school, female	1,050

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[Compiled from the Directory of the School Board, 1891-92, p. 13.]

Rank.	First year.	Annual increase.	Maximum.
Principals of district schools	$1,400	$100	$1,700
Principals of primary schools of four rooms	900	50	1,000
Principals of primary schools of more than four rooms, $50 for each additional room			1,200
First assistants	700	100	900
Assistants teaching seventh-year class	500	50	700
Assistants teaching sixth-year class	450	50	650
Assistants teaching classes below the sixth	400	50	600
Directors of kindergartens	400	50	600
Assistants in kindergartens	350	50	500
Teachers of German	800	100	1,100
Assistant teachers of German	400	50	650

Teachers in the "reserve corps" (substitutes) are paid the same salaries as regular teachers. No deductions of salary are made except for failing to report for duty. Principals of evening schools, $2.50 per night; assistants, $2 per night

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B.—A CONTRIBUTION TO THE HISTORY OF TEACHERS' SALARIES.

TABLE 1.—*Salaries paid to teachers in the public schools of Baltimore, Md., 1829 to 1839 inclusive.*

Rank.	Sex.	1829.		1830.		1831.		1832.		1833.		1834.		1835.		1836.		1837.		1838.		1839.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
MALE SCHOOLS.																							
Principals	Male	2	$400			1	$800	2	$1,000	1	$1,000			1	$1,000	1	$1,000	1	$750			4	$750
						2	600	1	600	1	750			1	700	3	750						
										1	600			1	600								
Assistants	Male																					4	400
FEMALE SCHOOLS.																							
Principals	Female	2	200			2	250	2	250	2	250			4	250	4	250	4	250			4	350
Assistants	Female																					3	200

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TABLE 2.—*Salaries of public-school teachers in Baltimore, Md., 1840 to 1849, inclusive.*

Rank.	Sex.	1840.		1841.		1842.		1843.		1844.		1845.		1846.		1847.		1848.		1849.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
MALE HIGH SCHOOL																					
Principal	Male	1	$1,500	....	.....	1	$1,500	....	.....	1	$1,500	1	$1,500	1	$1,500	....	.....	1	$1,500	1	$1,200
Assistants	Male	1	.....	....	.....	2	750	....	.....	2	750	2	750	2	750	....	.....	2	850	1	850
												1	a250	1	a250			1	600	2	600
																		1	350	1	300
																		1	250	1	150
																		2	150		
FEMALE HIGH SCHOOLS.b																					
Principals	Male	....	.....	....	.....	....	.....	....	.....	2	750	2	750	2	750	....	.....	2	850	2	850
Assistants	Male	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	2	600	2	600
Assistants	Female	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	3	300	3	300
MALE SCHOOLS.																					
Principals	Male	5	750	....	.....	6	850	....	.....	8	1,000	....	850	....	850	....	.....	10	850	10	850
Assistants	Male	4	400	....	.....	7	500	....	.....	8	525	....	500	....	500	....	.....	7	600	7	600
												3	125	....	125			2	300	3	300
																		1	200		
																		2	150		
Assistants	Female	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	15	150	19	150
FEMALE SCHOOLS.																					
Principals	Female	5	350	....	.....	6	450	....	.....	7	450	....	450	....	450	....	.....	10	450	10	450
										1	300	3	300	1	375			1	300	5	300
														1	350			1	200	1	200
														1	300						
Assistants	Female	5	200	....	.....	6	250	....	.....	7	250	....	250	....	250	....	.....	8	250	7	250
										2	50	5	100	....	100			3	200	32	150
																		24	150		
SPECIAL TEACHERS.																					
Music	Male	....	.....	....	.....	....	.....	....	.....	....	.....	2	500	2	500	....	.....	2	500	2	500

a For only a part of the time.

b Established in 1844.

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TABLE 3.—*Salaries of public-school teachers in Baltimore, Md., 1850 to 1859, inclusive.*

Rank.	Sex.	1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.		1859.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
CENTRAL HIGH SCHOOL (MALE).																					
Principal	Male	1	$1,200	1	$1,200	1	$1,200	1	$1,200	1	$1,500	1	$1,500	1	$1,500	1	$1,500	1	$1,500	1	$1,500
Assistants	Male	2	850	3	850	3	850	6	850	3	900	4	900	4	900	7	900	1	1,300	1	1,300
		1	600	2	750	2	750	1	500	3	850	2	850	2	850	1	850	7	900	5	1,100
		1	425	a1	700	2	425	1	425	1	600	2	600	3	600	1	400			1	1,050
		2	300	1	425	1	400	b1	250	2	500	1	450	b1	150	b1	150			1	900
		1	150	1	400					1	450	b1	150								
FEMALE HIGH SCHOOLS.																					
Principals	Male	2	1,000	2	1,000	2	1,000	2	1,000	2	1,000	2	1,000	2	1,200	2	1,200	2	1,200	2	1,200
Assistants	Male	2	600																		
Assistants	Female	3	300	2	600	2	600	2	600	2	600	2	600	2	600	2	600	2	600	2	600
				4	300	4	300	4	400	4	400	4	400	5	400	8	400	10	400	10	400
												2	350	3	350	2	350				
MALE GRAMMAR SCHOOLS.																					
Principals	Male	10	850	10	850	10	850	10	850	11	900	12	900	12	900	12	900	12	900	12	900
Assistants	Male	3	600	3	600	3	600	5	600	4	600	1	600	1	600	1	600	1	600	1	600
		3	500	2	500	2	500	1	450	4	500	5	500	6	500	6	500	6	500	6	500
		3	300	2	450	1	450	1	400	1	300	1	300	1	300	1	200	1	250	1	250
		1	200	2	300	3	300	1	350												
				1	200	1	200	2	300												
								1	250												
Assistants	Female	21	150	17	150	17	150	1	250	3	250	4	350	5	350	5	350	5	350	5	350
				7	100	7	100	22	150	6	200	10	200	9	200	10	200	1	250	1	300
										11	150	8	175	2	175	3	175	11	200	15	200
										1	100	4	150	6	150	7	150	2	175	1	175
												4	100	5	100	3	100	5	150	6	150
																		4	100	2	100
FEMALE GRAMMAR SCHOOLS.																					
Principals	Female	10	450	10	450	10	450	11	450	13	500	14	500	1	525	1	525	1	525	1	525
		1	250	1	300	1	350							13	500	13	500	13	500	13	500
Assistants	Female	8	250	9	250	9	250	10	250	3	300	5	300	5	300	6	300	6	300	9	300
		22	150	19	150	13	150	19	150	9	250	7	250	8	250	8	250	7	250	4	250
				5	100	10	100	3	100	6	175	7	175	6	175	12	175	9	175	15	175
										14	150	11	150	11	150	10	150	9	150	9	150
										1	100	4	100	4	100			1	125	2	100
																		5	100		

a This teacher divided his time between the three high schools.

b For a part of the time.

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TABLE 3.—*Salaries of public-school teachers in Baltimore, Md., 1850 to 1859, inclusive*—Continued.

Rank.	Sex.	1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.		1859.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
PRIMARY SCHOOLS. *a*																					
Principals	Male					2	300	2	300												
Principals	Female	1	300	10	250	24	250	28	250	4	300	15	300	16	300	22	300	25	300	1	325
		7	250							31	250	22	250	1	275	1	275	31	300
		1	200											25	250	20	250	20	250	11	250
Assistants	Female	11	150	11	150	16	150	35	150	1	200	4	200	5	200	6	200	11	200	19	200
				10	100	27	100	16	100	5	175	8	175	15	175	21	175	19	175	24	175
										43	150	38	150	30	150	45	150	36	150	38	150
										1	125	15	100	1	125	2	125	18	100	9	100
										11	100			24	100	6	100				
SPECIAL TEACHERS.																					
Music	Male	2	500	2	600	2	600	2	600	2	750	2	750	2	750	1	900	1	900	1	900
																1	750	1	750	1	750
SATURDAY NORMAL CLASSES.																					
Principals	Female													2	*b*100	2	*b*100	2		2	
EVENING SCHOOLS.																					
Principals	Male													6	200	6	200	6	200	6	200
Assistants	Male													10	100	4	100	8	200	11	100
FLOATING SCHOOLS.																					
Principal	Male															1	900	1	900	1	900
Assistant	Male																	1	400	1	400

a For males and for females.

b In addition to the salary as teacher in the schools.

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TABLE 4.—*Salaries of public-school teachers in Baltimore, Md., 1860 to 1869, inclusive.*

Rank.	Sex.	1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.		1868.		1869.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
Superintendent														1		1		1		1	$2,500
CENTRAL HIGH SCHOOL (male)																					
Principal	Male	1	$1,500	1	$1,500	1	$1,500			1	$1,800	1	$1,800	1	$2,200	1	$2,200	1	$2,700	1	2,700
Vice-principal	Male					1	1,300			1	1,600	1	1,600	1	2,000	1	2,000	1	2,200	1	2,200
Professors	Male	5	1,100	5	1,100	4	1,100			4	1,400	4	1,400	5	1,800	6	1,800	2	2,000	2	2,000
		1	1,050	1	1,050	1	1,050			3	1,200	3	1,200	3	1,500	2	1,500	6	1,800	4	1,800
		2	900	2	900	2	900														
FEMALE HIGH SCHOOLS.																					
Principals	Male	2	1,200	2	1,200	2	1,200			2	1,500	2	1,500	2	2,200	2	2,200	2	2,208	2	2,200
Assistants	Female	2	600	2	600	2	600			2	800	2	800	2	900	2	1,000	2	1,008	2	1,000
		11	400	11	400	9	400			11	600	9	600	12	700	15	900	20	900	20	900
						3	350					2	550	2	650	2	850	1	500	1	500
												1	500	2	600	1	800				
MALE GRAMMAR SCHOOLS.																					
Principals	Male	13	900	13	900	13	900			13	1,300	12	1,300	12	1,500	12	1,500	10	1,500	11	1,500
														1	1,100	1	1,400	1	1,404	4	1,404
																2	1,300	6	1,296	2	1,296
Principals	Female											1	1,000								
Assistants	Male	8	500	1	600	1	600			1	800	5	800	4	900	3	900	1	900	3	900
		1	250	7	500	7	500			1	700					1	800	4	804	4	804
				1	300	1	250			5	500										
				1	250	1	200														
Assistants	Female	5	350	5	350	5	350			3	600	7	600	6	700	6	700	11	672	10	672
		19	200	19	200	20	200			3	550	1	500	3	600	2	650	1	588	17	516
		6	150	5	150	7	150			34	350	34	350	37	500	2	600	14	516	40	504
		3	100	6	100	4	100			2	300	1	300	7	450	42	500	38	504		
										102		6	250	6	400	9	450	12	456		
																5	400	13	444		
FEMALE GRAMMAR SCHOOLS.																					
Principals	Female	1	525	1	525	1	525			13	700	14	700	13	900	13	900	19	900	15	900
		14	500	14	500	14	500			2	650	1	600	3	850	2	850	1	804	5	804
																4	800				
Assistants	Female	7	300	8	300	5	300			12	500	10	500	8	700	9	700	17	648	19	648
		7	250	6	250	9	250			1	450	2	450	3	600	1	650	3	504	20	504
		13	200	12	200	14	200			1	400	1	400	47	500	4	600	15	504	37	480
		10	150	1	175	1	175			37	350	41	350	7	450	52	500	41	480		
		5	100	14	150	14	150			6	300	7	300	6	400	11	450	2	444		
				2	100	**8**	**100**			**4**	**250**	**2**	**250**			**7**	**400**	**9**	432		

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TABLE 4.—*Salaries of public-school teachers in Baltimore, Md., 1860 to 1869, inclusive*—Continued.

Rank.	Sex.	1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.		1868.		1869.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
PRIMARY SCHOOLS.																					
Principals	Female	1	$325	1	$325	1	$350	....	.....	46	$500	43	$500	45	$700	44	$700	57	$696	56	$600
		31	300	33	300	1	325			1	450	1	450	4	600	6	600	2	600	6	600
		16	250	14	250	28	300			3	400	8	400	4	500	6	500				
						19	250														
Assistants	Female	49	200	1	225	1	225	....	.....	78	350	83	350	89	500	99	500	94	468	131	468
		27	150	54	200	40	200			34	300	33	300	34	450	33	450	35	432	47	432
		24	100	1	175	1	175			14	250	12	250	33	400	52	400	74	408	42	408
				37	150	34	150														
COLORED SCHOOLS.				11	100	32	100														
Principals	Male	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	4	800	3	900	7	900
Principals	Female	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	2	500	4	804		
																2	800	4	696	6	696
																2	700	2	600		
Assistants	Female	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	11	500	2	468	4	468
																5	400	1	432	10	432
SPECIAL TEACHERS.																		13	408	7	408
Music	Male	1	900	2	900	2	900	....	.....	2	1,200	2	1,200	2	1,500	2	.....	1	1,500	....	1,500
		1	750															2	1,250	....	1,250
SATURDAY NORMAL CLASSES.																					
Principals	Male	1	200	1	200	1	200	....	.....	1	200	....	.....	....	.....	....	.....	....	.....	....	.....
Assistants	Female	1	150	1	150	1	150	....	.....	1	150	....	.....	....	.....	....	.....	....	.....	....	.....
EVENING SCHOOLS.																					
Principals	Male	6	200	6	200	2	200	....	.....	5	200	5	200	4	200	7	400	8	300	4	(a)
Assistants	Male	11	100	12	100	3	100	....	.....	7	100	5	100	5	100	10	250	10	200	2	(b)
Assistants	Female	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	12	(b)
COLORED EVENING SCHOOLS.																					
Principals	Male	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	3	400	....	.....	....	.....
Principals	Female	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	2	400	....	.....	....	.....
Assistants	Male	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	1	250	....	.....	....	.....
Assistants	Female	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	3	250	....	.....	....	.....
FLOATING SCHOOLS.																					
Principal	Male	1	900	1	900	1	900	....	.....	1	1,000	....	.....	....	.....	....	.....	....	.....	....	.....
Assistant	Male	1	400	1	400	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....

a $3 per night

b $2 per night.

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TABLE 5.—*Schedules of teachers' salaries in Baltimore, Md., in force in 1869, 1876, 1880, and 1890.*

[NOTE—The schedules for the years 1870 to 1875, inclusive, are not available, but were probably not materially different from those of 1869 and 1876, since no mention is made in the reports of a general change. The changes made in the intermediate years between 1876 and 1880 and between 1880 and 1890 are indicated in the footnotes.]

Rank.	Sex.	1869.			1876.			1880.			1890.		
		First year.	Second year.	Third year.	First year.	Second year.	Third year.	First year.	Second year.	Third year.	First year.	Second year.	Third year.
Superintendent	Male	$2,500			$3,000			*a* $2,500			$2,500		
Assistant superintendent *b*	Male				1,800			1,800			*c* 2,000		
BALTIMORE CITY COLLEGE.													
Principal	Male	2,700			2,700			*a* 2,400			2,400		
Vice-principal	Male	2,200			*d* 2,450			(*d*)					
Professors	Male	*e* 2,000			2,000			2,000			2,000		
Professors	Male	*f* 1,800											
Adjunct professors and professors of writing, drawing, etc.	Male				1,800			1,800			1,800		
Tutors	Male				1,000			1,000			1,000		
FEMALE HIGH SCHOOLS.													
Principals	Male	2,208			2,208			2,208			*g* 2,400		
First assistants	Female	1,008			1,008			1,008			1,008		
Second assistants	Female	900			900			900			900		
Teachers of French, drawing, etc	Female	900			900			900			900		
MANUAL TRAINING SCHOOL. *h*													
Principal	Male										$500		
First assistant	Male										1,200		
Instructors	Male										1,200		
Assistants	Male										600 to 1,000		

a Reduced in 1878.
b Office created in 1872.
c Increased in 1884.
d The salary of the vice-principal was reduced to $2,200 in 1878, and the office was abolished in 1880.
e Paid to two professors.
f Paid to six professors.
g Change made in 1890.
h Established in 1884. Salaries: Of director, $1,800 first year, $1,900 second year, and $2,000 third year of service; of instructors, $1,200 per annum. In 1885 an officer of the Navy was detailed as principal and received $500 from the Board. Provision for assistants has been made as follows: At $600 in 1886, at $720 and at $1,000 in 1888, and at $900 in 1887.
i In addition to his salary as an officer in the United States Navy.

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TABLE 5.—*Schedules of teachers' salaries in Baltimore, Md., in force in 1869, 1876, 1880, and 1890*—Continued.

Rank.	Sex.	1869.			1876.			1880.			1890.		
		First year.	Second year.	Third year.	First year.	Second year.	Third year.	First year.	Second year.	Third year.	First year.	Second year.	Third year.
MALE GRAMMAR SCHOOLS.													
Principals	Male	$1,296	$1,404	$1,500	$1,296	$1,404	$1,500	$1,296	$1,404	$1,500	$1,296	$1,404	$1,500
First assistants	Male	804	900	.....	804	900	.....	804	900	.....	804	900	.....
First assistants	Female	588	672	.....	588	672	.....	588	672	.....	588	672	.....
Second assistants	Female	456	516	.....	456	516	.....	456	516	.....	456	516	.....
Third assistants	Female	444	504	.....	444	504	.....	444	504	.....	444	504	.....
ENGLISH-GERMAN SCHOOLS. [a]													
Principals	Male	.....	.....	.....	1,296	1,404	1,500	1,296	1,404	1,500	1,296	1,404	1,500
Vice-principals	Male	.....	.....	.....	804	900	1,008	804	900	1,008	804	900	1,008
First assistants (German)	Male	.....	.....	.....	600	.....	.....	600	.....	.....	600	.....	.....
First assistants (English)	Female	.....	.....	.....	.....	.....	.....	.....	.....	.....	564	648	.....
Teacher in charge of lowest grade	Female	.....	.....	.....	.....	.....	.....	.....	.....	.....	[b] 504	.....	.....
Assistants (grammar grades)	Female	.....	.....	.....	444	504	.....	444	504	.....	444	504	.....
Assistants (primary grades)	Female	.....	.....	.....	408	432	468	408	432	468	408	432	468
FEMALE GRAMMAR SCHOOLS.													
Principals	Female	804	900	.....	804	900	.....	804	900	.....	804	900	.....
First assistants	Female	564	648	.....	564	648	.....	564	648	.....	564	648	.....
Second assistants	Female	444	504	.....	444	504	.....	444	504	.....	444	504	.....
Third assistants	Female	432	480	.....	432	480	.....	432	480	.....	432	480	.....
PRIMARY SCHOOLS.													
Principals	Female	600	696	.....	600	696	.....	600	696	.....	600	696	.....
Assistants	Female	408	442	468	408	432	468	408	432	468	408	432	468
Teacher in charge of lowest grade	Female	.....	.....	.....	504	.....	.....	[c]	.....	.....	504	.....	.....
UNCLASSIFIED SCHOOLS.													
Principals	.....	696	780	840	696	780	900	696	780	900	696	780	900
First assistants	.....	504	552	600	504	552	600	504	552	600	504	552	600
COLORED GRAMMAR SCHOOLS.													
Principals	Male	.....	.....	.....	1,200	.....	.....	[d] 1,296	1,404	1,500	1,296	1,404	1,500
First assistants	Male	.....	.....	.....	800	900	.....	[d] 804	900	.....	804	900	.....
First assistants	Female	.....	.....	.....	.....	.....	.....	[d] 588	672	.....	588	672	.....
Second assistants	Female	.....	.....	.....	456	516	.....	456	516	.....	456	516	.....
Third assistants	Female	.....	.....	.....	.....	.....	.....	[d] 444	504	.....	444	504	.....

COLORED PRIMARY SCHOOLS.													
Principals	Male	804	900		c 804	c 900		804	900		804	900	
Principals	Female				600	696		600	696		600	696	
Assistants	Male				700			700			700		
Assistants	Female	408	432	468	408	432	468	408	432	468	408	432	468
Teacher in charge of lowest grade	Female										b 504		
INTERMEDIATE SCHOOLS f													
Principals	Male										1,200		
Principals	Female										804		
First assistants	Female										600		
Teacher in charge of lowest grade	Female										444	468	504
Assistants (grammar grades)	Female										444	504	
Assistants (primary grades)	Female										408	432	468
SATURDAY NORMAL CLASS.													
Principal					g 200			g 200			g 200		
Assistants					g 150			g 150			g 150		
SPECIAL TEACHERS.													
Music	Male	{ 1,500 / 1,250 }			1,200			1,200			b 1,500		
Drawing	Female				500			500			500		
EVENING SCHOOLS.													
Principals	Male	h 3			h 3			h 2			h 2.50		
Assistants	Male	h 2			h 2			h 1.50			h 1.50		

a From 1880 to 1886, inclusive, these were called "public schools." The first was established in 1874.
b Change made in 1887.
c The special provision for teachers of the lowest grades was not made during the years intervening between 1877 and 1884.
d Change made in 1877.
e Those who have passed an intermediate examination receive $1,000 per annum.
f Established in 1890.
g In addition to salary as a teacher in the schools.
h Per evening, for actual service.
i Reduced in 1879.

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TABLE 6.—*Salaries of public-school teachers in St. Louis, Mo., 1837 to 1848, inclusive.*

Rank.	Sex.	1837.		1838.		January, 1842.		June, 1842.		December, 1842.		1843.		1844.		1845.		1846.		1847.		1848.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
Superintendent	Male	....	....	....	....	1	*a* $300	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	*b* $900
Principals	Male	1	$900	2	$600	1	900	3	$800	3	$600	3	$600	1	$700	....	$700	....	$700	....	$600	....	750
						1	800					2	500	4	500	....	500	....	500			....	600
Principals	Female	1	500	2	500	1	500	3	500	3	360	3	360	1	400	....	400	....	400	....	350	....	450
						2	400					2	300	4	300	....	300	....	300			....	400
Assistants	Male	....	....	....	....	....	....	....	....	....	....	....	....	....	250	....	250	....	250	....	....	....	....
Assistants	Female	....	....	....	....	....	200	....	250	....	200	....	200	....	250	....	250	....	250	....	....	....	....

a Same in 1841.

b Same in 1849.

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TABLE 7.—*Salaries of public-school teachers in St. Louis, Mo., for the dates named.*

Rank.	Sex.	1854.		1858.		1859.		1860.		1861.		1862.		1864.		1865.		1866.		1868.		1869.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
Superintendent (*a*)	Male	*b* 1	$1,500	....	.....	....	.....	....	.....	....	$1,500	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....
NORMAL SCHOOL.																							
Principal	Male	....	.....	1	$2,500	1	$2,500	1	$2,500	1	1,200	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....
Principal	Female	....	.....	....	.....	....	.....	....	.....	....	.....	1	$900	1	$1,500	1	$1,500	1	$2,000	1	$2,000	1	$2,500
Assistants	Female	....	.....	1	1,500	1	900	1	900	....	.....	1	400	1	1,000	1	1,000	1	1.100	1	1,300	1	1,300
																1	750	1	850	1	1,100	1	1,200
																				1	1,000	1	900
HIGH SCHOOL.																				1	800	2	750
Principal	Male	1	1,300	1	2,500	1	2,500	1	2,500	1	1,200	1	1,600	1	2,500	1	2,500	1	2,750	1	2,750	1	3,000
Assistants	Male	....	900	1	1,500	1	1,500	1	1,500	1	900	2	1,000	1	1,800	1	1,800	1	2,000	1	2,250	1	2,250
		....	750	5	1,200	4	1,200	3	1,200	2	800	2	800	3	1,500	3	1,500	3	1,700	1	2,000	2	2,000
								2	1,000			1	225							2	1,900	1	1,900
																				1	1,800	1	1,800
Assistants	Female	....	.....	1	900	1	900	1	750	1	500	1	700	1	1,200	1	1,000	1	1,200	1	1,400	1	1,400
				1	650	1	650	1	700	1	450	2	500	1	1,000	2	900	2	1,000	1	1,100	1	1,300
														1	900	1	600	1	700	1	1,000	2	1,000
																				1	900	1	900
																						1	750
INTERMEDIATE SCHOOL.																							
Principal	Male	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	1	2,250
Assistant	Male	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	1	2,000
Assistant	Female	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	1	900
DISTRICT SCHOOLS.																							
Principals	Male	....	1,100	5	1,250	5	1,250	8	1,250	....	800	6	1,000	7	1,500	11	1,500	9	1,700	13	2,000	14	2,000
		....	900	4	1,100	5	1,200	2	1,200	....	700	1	900	4	1,400			3	1,500	1	650	1	700
		....	750	1	1,000	2	1,100	2	1,100	....	650	2	800										
				1	900																		
Principals	Female	....	500	12	750	10	750	7	750	....	450	5	550	5	900	5	900	3	1,000	2	1,400	2	1,400
		....	450	5	650	2	700	3	650	....	400	6	500	10	800	1	700	8	900	1	1,300	6	1,200
		....	400	4	600	6	650	2	600			1	450	2	650	8	800	4	800	14	1,000	5	1,000
				6	550	5	600	5	550			4	400			4	650	3	700	1	900	7	900
				1	500	1	550	1	500											1	800	1	750
				3	450	5	500													4	700	5	700
						3	450													1	600	1	650

a An assistant superintendent for the German department was employed in 1865 and thereafter, and an English assistant superintendent in 1868. Their salaries are not stated.

b Salary in 1850 and 1851, $1,000; in 1852 and 1853, $1,500 per annum.

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TABLE 7.—*Salaries of public-school teachers in St. Louis, Mo., for the dates named*—Continued.

Rank.	Sex.	1854.		1858.		1859.		1860.		1861.		1862.		1864.		1865.		1866.		1868.		1869.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
DISTRICT SCHOOLS—continued.																							
Assistants	Male																			1	$1,500	2	$800
																						1	750
																						1	700
																						1	650
English-German assistants																4	$700	6	$700	7	700		
																2	650	2	650	4	650		
																1	600	2	600				
																1	800	3	1,000	19	750		
Assistants	Female		$350	13	$400	21	$400	22	$425		$350	16	$400	1	$800	31	600	35	650	22	650	23	750
			325	12	375	58	375	72	400		325	39	375	4	700	81	550	82	600	123	600	3	700
			300	49	350	10	350	21	375		300	4	350	19	600	23	500	25	550	46	550	51	650
											275	14	325	62	550	17	450	24	500	59	500	129	600
														36	500							65	550
														63	450							34	500
																						59	400
SPECIAL TEACHERS.																							
Music	Male	1	600	1	1,200	1	1,200	1	1,200			1	600	1	1,300	1	1,300	2	1,500	3	2,000	3	2,000
						1	500	1						1	1,200	1	1,200						
Drawing	Male							1															
Physical education	Male					1	500																
Writing	Male																			1	1,500	1	2,000

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TABLE 8.—*Salaries of public-school teachers in St. Louis, Mo., 1870 to 1879, inclusive.*

Rank.	Sex.	1870.		1871.		1872.		1873.		1874.		1875.		1876.		1877.		1878.		1879.[a]	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
Superintendent	Male	1	(b)	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....
Assistant superintendent	Male	1	(b)	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....
Assistant superintendent (German department).	Male	1	(b)	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....
NORMAL SCHOOL.																					
Principal	Female	1	$2,500	1	$2,500																
Principal	Male							1	$3,200	1	$3,000	1	$3,000	1	$3,000	1	$2,775	1	$2,600	1	$2,600
Assistant	Male							1	1,500	1	1,500										
Assistants	Female	1	1,300	1	1,400	1	1,300	1	1,400	1	1,400	1	1,400	1	1,400	1	1,295	5	950	4	950
		2	900	1	1,100	2	1,100	2	1,100	3	1,100	1	1,320	1	1,200	1	1,156	1	850	1	900
		3	750	1	1,000	2	900	2	1,000	1	1,000	4	1,100	4	1,100	3	1,018	2	800	2	800
				1	900	1	800	2	900	4	900	3	900	2	900	1	925	1	700	1	750
				1	800			1	800	1	700	1	800	1	800	1	833				
								1	700			1	700	1	750	1	786				
																1	740				
																1	648				
HIGH SCHOOL.																					
Principal	Male	1	3,000	1	3,200	1	3,200	1	3,000	1	3,000	1	3,000	1	3,000	1	2,775	1	2,600	1	2,600
Assistants	Male	1	2,250	1	2,250	1	2,250	1	2,250	1	2,250	1	2,400	1	2,400	1	2,081	1	2,000	1	2,000
		3	2,000	1	2,000	1	2,000	1	2,000	2	2,000	1	2,250	1	2,250	5	1,850	4	1,800	3	1,800
		1	1,500	1	1,700	1	1,800	1	1,900	2	1,700	2	2,000	2	2,000			1	1,400	1	1,500
				2	1,600	2	1,700	2	1,800	1	1,900	2	1,800	2	1,900					1	1,400
						1	1,000	1	1,300												
Assistants	Female	2	1,400	1	1,400	1	1,400	1	1,400	2	1,400	1	1,600	2	1,400	1	1,295	1	1,200	2	1,200
		1	1,100	1	1,200	2	1,100	2	1,100	3	1,000	2	1,400	1	1,200	1	1,203	1	1,150	2	950
		1	1,000	2	1,000	2	900	4	900	2	950	2	1,100	2	1,100	2	1,017	2	950	1	900
		1	900	1	900	1	800					1	900	1	900	1	888	1	750		
		1	750	1	700							1	500	1	700	1	644	1	475		
																1	480				
BRANCH HIGH SCHOOL. (c)																					
Principals	Male	1	2,250	1	2,250	1	2,750	1	2,400	1	2,400	1	2,400	1	2,400	1	2,220	1	2,000	1	2,000
				1	2,200	3	2,250	3	2,250	3	2,250	4	2,250	4	2,250	4	2,081				
Principal	Female							1	700		1,400										
Assistants	Male	1	2,000	1	2,000			1	1,300	1	1,400	1	1,400	2	1,400	4	1,295	2	1,200	3	1,200
								1	900	2	900	3	900	1	1,300	2	1,203	1	1,050		
										1	600			2	1,200	1	1,018	1	1,000		
														1	1,100	1	925				
Assistants	Female	1	900	1	1,100	3	1,200	1	1,400	2	1,400	3	1,400	2	1,400	2	1,295	1	1,000	1	1,200
				3	900	4	900	2	1,300	1	1,300	1	1,200	1	1,250	9	833	4	850	1	1,050
				2	800	7	800	10	900	10	900	2	1,000	1	1,200	2	786	1	800	1	950

a For schedule under which these salaries were paid, see page 662. *b* Salary not stated. *c* Called "intermediate schools" prior to 1871.

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TABLE 8.—*Salaries of public-school teachers in St. Louis, Mo., 1870 to 1879, inclusive*—Continued.

Rank.	Sex.	1870.		1871.		1872.		1873.		1874.		1875.		1876.		1877.		1878.		1879.a	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
BRANCH HIGH SCHOOL*b*—Cont'd.																					
Assistants	Female			1	$700	4	$700	2	$800	5	$800	10	$900	10	$900	5	$740	1	$700	4	$800
								1	750	1	700	3	800	3	800	1	694			1	750
								1	700			2	700	3	750	2	648			1	700
DISTRICT SCHOOLS.																					
Principals	Male	17	$2,000	16	2,250	14	2,200	13	2,200	1	2,250	11	2,200	12	2,200	16	2,035	23	2,000	23	2,000
		2	1,500	1	2,000	1	2,000	1	2,000	12	2,200	9	2,000	8	2,000	5	1,850	2	1,800	1	1,800
		1	700	5	1,500	3	1,600	1	1,800	11	2,000	1	1,800			1	1,700	1	1,700	1	1,700
				1	700	3	1,500	3	1,700	1	1,800					1	1,500	2	1,100	1	1,500
						1	900	3	1,500							1	1,110	1	1,050	2	1,200
								3	1,200							1	1,018	1	1,000	1	1,000
								1	1,000							1	925	2	900	2	950
								4	900							3	833	4	800	2	900
								1	700							4	740	2	750	3	800
																2	648	3	700	3	750
																		1	650	2	700
																		3	600	1	650
																				3	600
Principals	Female	2	2,000	2	2,200	1	2,200	1	2,200	2	2,200	2	2,200	2	2,200	2	2,035	3	2,000	3	2,000
		8	1,200	1	1,500	1	2,000	1	2,000	1	1,800	1	2,000	1	2,000	2	1,850	1	1,800	1	1,800
		3	1,000	8	1,200	1	1,500	1	1,700	1	1,700	1	1,900	9	1,200	1	1,203	3	1,300	1	1,400
		5	900	2	1,000	1	1,600	8	1,200	8	1,200	9	1,200	1	1,000	6	1,110	2	1,200	2	1,300
		2	700	9	900	9	1,200	4	1,000	4	1,000	3	1,000	10	900	2	925	3	1,100	3	1,100
				6	700	4	1,000	10	900	11	900	9	900	1	750	8	833	2	900	1	1,000
						10	900	5	700	2	700	1	750	2	700	2	740	5	850	1	900
						3	700					2	700			3	648	2	800	7	850
																		1	650	1	800
																		1	600	1	700
																				1	650
																				1	600
																				1	555
Assistants	Male															1	1,018	3	1,200	1	1,150
																1	450	1	1,100	1	1,100
																4	400	1	1,050	1	1,050
																		1	450	1	700
																		9	400	1	650
																				1	600
																				1	463
																				3	450
																				10	400

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Assistants	Female	1	1,200	19	900	1	1,000	19	900	20	900	1	1,000	1	1,000	2	1,110	1	1,200	40	850		
		20	900	50	750	16	900	63	750	67	760	19	900	15	900	5	925	33	850	4	800		
		31	750	1	700	1	800	82	650	79	650	60	750	4	800	15	833	12	800	91	700		
		64	650	59	650	62	750	197	600	211	600	82	650	62	750	1	786	4	750	92	609		
		169	600	182	600	2	700	55	550	33	550	199	600	4	700	7	740	81	700	194	555		
		65	550	56	550	75	650	32	500	57	500	64	550	83	650	19	648	9	650	6	550		
		29	500	30	500	165	600					60	500	182	600	65	644	88	600	62	500		
						52	550					2	400	48	550	84	601	179	555	2	500		
						33	500							93	500	179	555	5	550	2	475		
														53	400	43	508	43	509	91	463		
														4	200	66	463	5	500	24	450		
																71	450	65	463	16	400		
																93	400	99	450	7	350	c	
																21	200	17	400	8	325	c	
																21	100	17	300	12	300	c	
																		17	250	11	275	c	
																		27	200	7	250	c	
																		41	100	32	200	c	
																				34	125	c	
German teachers	Male	8	000	2	1,000	1	1,200	3	1,000	4	1,000	4	1,000	4	1,000	4	925	5	850	3	850		
				7	800	2	1,000	3	850	2	850	1	850	1	850	1	833	4	750	2	750		
						1	850	9	800	10	800	12	800	11	800	1	786	7	700	9	700		
						9	800	1	400	1	400	1	550	1	650	9	740	3	650	2	650		
												1	500	1	600	2	694	1	550	1	600		
												2	400	1	400	1	648	1	509	1	555		
																1	601	1	475	1	463		
																3	508	1	463	1	450		
																1	463	2	400	1	350		
German teachers	Female	16	750	3	1,000	6	1,000	6	1,000	8	1,000	7	1,000	8	1,000	8	925	8	850	9	850		
		6	650	15	750	1	900	1	900	11	750	15	750	1	850	1	786	2	800	2	800		
		1	600	7	700	6	800	11	750	7	700	1	700	1	800	4	740	4	750	2	750		
		4	550	2	650	14	750	2	700	3	650	14	650	12	750	12	694	11	700	11	700		
		7	400	5	600	1	700	9	650	17	600	8	600	1	700	4	648	3	650	1	650		
				3	550	4	650	14	600	6	550	7	550	17	650	16	601	15	600	16	600		
				4	500	9	600	4	550	5	500	3	500	13	600	9	555	7	555	4	555		
				3	400	6	550	4	500	3	400	1	400	5	520	3	508	1	550	2	500		
						4	500	5	400					2	500	8	463	1	500	9	463		
														1	400	1	400	13	463	2	450		
																		1	450	1	400		
																		4	400	1	300		
																		1	300	2	250		
																		3	200				
Special teachers of music, drawing, and writing.	Male	4	2,000	4	2,000	4	2,000	3	2,000	3	2,000	3	2,000	3	2,000	4	1,500	4	1,500	3	1,500		
						1	1,500	1	1,600	1	1,700	1	1,800	1	1,900	2	749	2	1,400	1	500		
								2	1,500					1	1,500	1	480	1	800				
																		1	250				
Special teachers, etc	Female													1	1,000	1	925	1	1,500	1	850		
																3	833	1	850	1	750		
																1	740	1	700	1	700		
																1	648	1	250	1	200		
																1	240	1	200				

a For schedule under which these salaries were paid see next page. b Called "intermediate schools" prior to 1871. c For half the time.

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TABLE 9.—*Schedules of salaries of public-school teachers in St. Louis, Mo., 1879 to 1882, inclusive.* a

Rank.	1879. b					1880.					1881.					1882.				
	First year.	Second year.	Third year.	Fourth year.	Fifth year.	First year.	Second year.	Third year.	Fourth year.	Fifth year.	First year.	Second year.	Third year.	Fourth year.	Fifth year.	First year.	Second year.	Third year.	Fourth year.	Fifth year.
NORMAL AND HIGH SCHOOLS.																				
Principal of Normal School	$2,400	$2,500	$2,600	.....	.....	$2,400	$2,500	$2,600	.....	.....	$2,400	$2,500	$2,600	.....	.....	$2,400	$2,500	$2,600	.....	.....
Principal of High School	2,400	2,500	2,600	.....	.....	2,400	2,500	2,600	.....	.....	2,400	2,500	2,600	.....	.....	2,400	2,500	2,600	.....	.....
Assistant principal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,700	1,800	1,900	$2,000	.....	1,700	1,800	1,900	$2,000	.....
First assistant	1,600	1,700	1,800	$1,900	$2,000	1,600	1,700	1,800	$1,900	$2,000	1,600	1,700	1,800	1,900	$1,950	1,600	1,700	1,800	1,900	$1,950
Second assistant	1,400	1,500	1,600	1,700	1,800	1,400	1,500	1,600	1,700	1,800	1,400	1,500	1,600	1,700	1,800	1,400	1,500	1,600	1,700	1,800
Third assistant	1,000	1,050	1,100	1,150	1,200	1,000	1,050	1,100	1,150	1,200	1,000	1,050	1,100	1,150	1,200	1,000	1,050	1,100	1,150	1,200
Fourth assistant	750	800	850	900	950	750	800	850	900	950	750	800	850	900	950	750	800	850	900	950
Fifth assistant	650	700	750	800	.....	650	700	750	800	.....	650	700	750	800	.....	650	700	750	800	.....
DISTRICT SCHOOLS.																				
Principals of—																				
First-class schools (c)	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....
Second-class schools	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....
Third-class schools	1,200	1,300	1,400	1,500	.....	1,200	1,300	1,400	1,500	.....	1,200	1,300	1,400	1,500	.....	1,200	1,300	1,400	1,500	.....
Fourth-class schools	900	950	1,000	1,050	1,100	900	950	1,000	1,050	1,100	900	950	1,000	1,050	1,100	900	950	1,000	1,050	1,100
Fifth-class schools	800	850	900	.....	.....	800	850	900	.....	.....	800	850	900	.....	.....	800	850	900	.....	.....
Sixth-class schools	700	750	800	.....	.....	700	750	800	.....	.....	700	750	800	.....	.....	700	750	800	.....	.....
Seventh-class schools	600	650	.....	.....	.....	600	650	.....	.....	.....	600	650	.....	.....	.....	600	650	.....	.....	.....
Assistant principal	1,000	1,050	1,100	1,150	1,200	1,000	1,050	1,100	1,150	1,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Head assistant	650	700	750	800	850	650	700	750	800	850	650	700	750	800	850	650	700	750	800	850
First assistant	500	550	600	650	700	500	550	600	650	700	500	550	600	650	700	500	550	600	650	700
Second assistant	450	475	500	550	600	450	475	500	550	600	450	475	500	550	600	440	480	520	560	600
Third assistant	400	450	463	509	555	400	450	463	509	555	400	450	463	509	555	400	440	480	520	560
Fourth assistant (half day)	200	250	300	.....	.....	200	250	300	.....	.....	200	250	300	.....	.....	200	250	300	.....	.....
KINDERGARTENS.																				
Supervisor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	900	.....	.....	.....	.....	900	.....	.....	.....	.....
Director (whole day)	450	475	500	550	600	450	475	500	550	600	450	475	500	550	600	450	475	500	550	600
Director (half day)	250	275	300	325	350	250	275	300	325	350	250	275	300	325	350	250	275	300	325	350
Paid assistant (whole day)	200	.....	.....	.....	.....	200	.....	.....	.....	.....	200	.....	.....	.....	.....	200	.....	.....	.....	.....
Paid assistant (half day)	125	.....	.....	.....	.....	125	.....	.....	.....	.....	125	.....	.....	.....	.....	125	.....	.....	.....	.....
SPECIAL TEACHERS.																				
Music	1,300	1,400	1,500	.....	.....	1,350	.....	.....	.....	.....	1,200	1,300	1,400	1,500	.....	1,200	1,300	1,400	1,500	.....

DEAF-MUTE SCHOOL.																				
Principal											650	700	750	800	850	650	700	750	800	850

a See, also, Table 12, page 666, showing the number of teachers of each rank, and Table 13, page 667, showing the number receiving each amount.

b For salaries paid under this schedule see pages 659 to 661.

c "The class to which a school belongs is determined by the number of regular assistants to which the school is entitled. The grade of pupils taught does not affect the classification of the school.

"A school entitled to 18 or more regular assistants ranks as first class; to 13 and not more than 17 assistants, as second class; to 10 and not more than 12 assistants, as third class; to 8 or 9 assistants, as fourth class; to 6 or 7 assistants, as fifth class; to 4 or 5 teachers, as sixth class; to less than 4 teachers, as seventh class."

"In the assignment of teachers there shall be an average of at least 1 assistant for each 20 pupils in the Normal School, 1 assistant to teach 30 pupils in the High School, 1 assistant to each 50 pupils in the fifth, sixth, seventh, and eighth years, and 1 to each 60 pupils in the first, second, third, and fourth years in the district schools."

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TABLE 10.—*Schedules of salaries of public-school teachers in St. Louis, Mo., for the dates named.* a

Rank.	1883.					1884.					1886.					1887.				
	First year.	Second year.	Third year.	Fourth year.	Fifth year.	First year.	Second year.	Third year.	Fourth year.	Fifth year.	First year.	Second year.	Third year.	Fourth year.	Fifth year.	First year.	Second year.	Third year.	Fourth year.	Fifth year.
NORMAL AND HIGH SCHOOLS.																				
Principal of Normal School	$2,400	$2,500	$2,600	.....	.....	$2,400	$2,500	$2,600	$2,750	.....	$2,400	$2,500	$2,600	$2,750	.....	$2,400	$2,500	$2,600	$2,750	.....
Principal of High School	2,400	2,500	2,600	.....	.....	2,400	2,500	2,600	2,750	.....	2,400	2,500	2,600	2,750	.....	2,400	2,500	2,600	2,750	.....
Assistant principal	1,700	1,800	1,900	$2,000	.....	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....
First assistant	1,600	1,700	1,800	1,900	$1,950	1,600	1,700	1,800	1,900	$1,950	1,600	1,700	1,800	1,900	$1,950	1,600	1,700	1,800	1,900	$1,950
Second assistant	1,400	1,500	1,600	1,700	1,800	1,400	1,500	1,600	1,700	1,800	1,400	1,500	1,600	1,700	1,800	1,400	1,500	1,600	1,700	1,800
Third assistant	1,000	1,050	1,100	1,150	1,200	1,000	1,050	1,100	1,150	1,200	1,000	1,050	1,100	1,150	1,200	1,000	1,050	1,100	1,150	1,200
Fourth assistant	750	800	850	900	950	750	800	850	900	950	750	800	850	900	950	750	800	850	900	950
Fifth assistant	650	700	750	800	.....	650	700	750	800	.....	650	700	750	800	.....	650	700	750	800	.....
DISTRICT SCHOOLS.																				
Principal of—																				
First-class school *b*	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....
Second-class school	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....
Third-class school	1,200	1,300	1,400	1,500	.....	1,200	1,300	1,400	1,500	.....	1,200	1,300	1,400	1,500	.....	1,200	1,300	1,400	1,500	.....
Fourth-class school	900	950	1,000	1,050	1,100	900	950	1,000	1,050	1,100	900	950	1,000	1,050	1,100	900	950	1,000	1,050	1,100
Fifth-class school	800	850	900	.....	.....	800	850	900	.....	.....	800	850	900	.....	.....	800	850	900	.....	.....
Sixth-class school	700	750	800	.....	.....	700	750	800	.....	.....	700	750	800	.....	.....	700	750	800	.....	.....
Seventh-class school	600	650	.....	.....	.....	600	650	.....	.....	.....	600	650	.....	.....	.....	600	650	.....	.....	.....
Head assistant	650	700	750	800	850	650	700	750	800	850	650	700	750	800	850	650	700	750	800	850
First assistant	500	550	600	650	700	500	550	600	650	700	500	550	600	650	700	500	550	600	650	700
Second assistant	440	480	520	560	600	440	480	520	560	600	440	480	520	560	600	440	480	520	560	600
Third assistant	400	440	480	520	560	400	440	480	520	560	400	440	480	520	560	400	440	480	520	560
Fourth assistant (half day)	200	250	300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
KINDERGARTENS.																				
Supervisor	900	.....	.....	.....	.....	900	.....	.....	.....	.....	1,000	.....	.....	.....	.....	1,000	.....	.....	.....	.....
Director (whole day)	500	550	600	650	700	500	550	600	650	700	500	550	600	650	700	500	550	600	650	700
Director (half day)	300	350	400	.....	.....	300	350	400	.....	.....	300	350	400	.....	.....	300	350	400	.....	.....
Paid assistant (whole day)	250	275	.....	.....	.....	250	275	.....	.....	.....	275	300	.....	.....	.....	275	300	.....	.....	.....
Paid assistant (half day)	125	150	175	.....	.....	125	150	175	.....	.....	150	175	200	.....	.....	150	175	200	.....	.....
Supervisor of music	1,200	1,300	1,400	1,500	.....	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....
Supervisor of drawing	.....	.....	.....	.....	.....	1,800	.....	.....	.....	.....	1,800	.....	.....	.....	.....	1,500	.....	.....	.....	.....
Assistant supervisor of drawing	.....	.....	.....	.....	.....	1,200	.....	.....	.....	.....	1,400	.....	.....	.....	.....	.....	.....	.....	.....	.....
DEAF-MUTE SCHOOL.																				
Principal	1,000	.....	.....	.....	.....	1,000	.....	.....	.....	.....	1,000	.....	.....	.....	.....	1,000	.....	.....	.....	.....
Assistant	400	440	480	520	560	400	440	480	520	560	400	440	480	520	560	400	440	480	520	560

a See, also, Table 12, page 666, showing the number of teachers of each rank, and Table 13, page 667, showing the number receiving each amount.
b For rule of classification of schools, see foot note c, page 662.

TABLE 11.—*Schedules of salaries of public-school teachers in St. Louis, Mo., 1888 and 1889.* a

Rank.	1888.					1889.				
	First year.	Second year.	Third year.	Fourth year.	Fifth year.	First year.	Second year.	Third year.	Fourth year.	Fifth year.
NORMAL AND HIGH SCHOOLS.										
Principal of Normal School	$2,400	$2,500	$2,600	$3,000	.....	$2,400	$2,500	$2,600	$3,000	.....
Principal of High School	2,400	2,500	2,600	2,750	.....	2,400	2,500	2,600	3,000	.....
Assistant principal	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....
First assistant	1,400	1,500	1,600	1,700	$1,800	1,400	1,500	1,600	1,700	$1,800
Second assistant	1,300	1,350	1,400	1,450	1,500	1,300	1,350	1,400	1,450	1,500
Third assistant	1,000	1,050	1,100	1,150	1,200	1,000	1,050	1,100	1,150	1,200
Fourth assistant	750	800	850	900	950	750	800	850	900	950
Fifth assistant	650	700	750	800	.....	650	700	750	800	.....
DISTRICT SCHOOLS.										
Principal of—										
First-class school b	1,700	1,800	1,900	2,000	.....	1,700	1,800	1,900	2,000	.....
Second-class school	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....
Third-class school	1,200	1,300	1,400	1,500	.....	1,200	1,300	1,400	1,500	.....
Fourth-class school	900	950	1,000	1,050	1,100	900	950	1,000	1,050	1,100
Fifth-class school	800	850	900	.....	.....	800	850	900	.....	.....
Sixth-class school	700	750	800	.....	.....	700	750	800	.....	.....
Seventh-class school	600	650	.....	.....	.....	600	650	.....	.....	.....
Head assistant	650	700	750	800	850	650	700	750	800	850
First assistant	500	550	600	650	700	500	550	600	650	700
Second assistant	440	480	520	560	600	440	480	520	560	600
Third assistant	400	440	480	520	560	400	440	480	520	560
KINDERGARTENS.										
Supervisor	1,000	.....	.....	.....	.....	1,000	.....	.....	.....	.....
Director (whole day)	500	550	600	650	700	500	550	600	650	700
Director (half day)	300	350	400	.....	.....	300	350	400	.....	.....
Paid assistant (whole day)	275	300	.....	.....	.....	275	300	.....	.....	.....
Paid assistant (half day)	150	175	200	.....	.....	150	175	200	.....	.....
Supervisor of music	1,500	1,600	1,700	1,800	.....	1,500	1,600	1,700	1,800	.....
Supervisor of drawing	1,500	.....	.....	.....	.....	1,500	.....	.....	.....	.....
DEAF-MUTE SCHOOL.										
Principal	1,000	.....	.....	.....	.....	1,000	.....	.....	.....	.....
Assistant	400	440	480	520	560	400	440	480	520	560

a See Table 12, p. 666, for number of teachers of each rank, and Table 13, p. 667, for number receiving each amount.

b For rule of classification, see footnote c, p. 662.

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TABLE 12.—*Number of public-school teachers of the ranks indicated in St. Louis, Mo., 1879 to 1889, inclusive.* a

Rank.	1879.		1880.		1881.		1882.		1883.		1884 b		1885.		1886.		1887.		1888.		1889.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
NORMAL SCHOOL.																						
Principal	1		1		1		1		1				1		1		1		c1		c1	
Assistants		8		6		5		4		4				5		7		7		8		7
HIGH SCHOOL.																						
Principal	1		1		1		1		2				2		2		2		(c)		(c)	
Assistants	7	5	11	15	11	15	11	15	10	17			10	19	11	21	13	23	16	25	19	30
DISTRICT SCHOOLS.																						
Principals (white)	33	15	34	14	33	14	35	16	35	16			36	16	35	18	35	21	33	23	32	23
Principals (colored)	12		12		13		13		13				13		13		13		13		12	
Assistants (white)	21	642	16	634	15	645	16	681	18	701			21	740	23	758	20	719	1	701	1	742
Assistants (colored)	27	17	17	30	16	32	18	38	19	40			14	51	13	52	13	51	8	64	6	61
Assistants in kindergartens		156		178		187		206		148				186		198		197		201		204
EVENING SCHOOLS.																						
Principals	28		10		14	1	20	1	23	1			30		5		5		5		6	
Assistants	22	41	11	19	10	26	17	32	27	18			15	38	20	15	23	13	20	20	18	31
Music and drawing teachers	4	4	4	4	4	4	4	6	4	4			4	8	4	9	4	9	3	10	3	10
DISTRICT SCHOOLS (INCLUDED ABOVE).																						
Head assistants	46		45		45		48		44				45		30		39		40		37	
First assistants (grammar)	40		39		39		41		40				46		48		46		43		51	
First assistants (primary)	56		47		42		56		60				66		60		69		73		70	
Second assistants (grammar)	36		42		41		42		43				40		45		44		42		50	
Second assistants (primary)	57		54		60		61		59				64		68		59		60		62	
Third assistants	404		413		424		454		458				479		486		460		512		540	
Kindergarten directors	55		60		61		61		53				68		67		68		71		71	
Kindergarten paid assistants	101		118		126		145		95				118		126		129		131		133	
Head assistants (German department)	18		17		14		17		17				19		17		17		(d)		(d)	
First assistants (German department)	21		21		19		21		21				28		26		21					
Second assistants (German department)	15		9		8		5		9				6		6		6					
Third assistants (German department)	15		17		16		29		27				33		42		30					

a See Tables 9, 10, and 11, pp. 662–665, for schedules of salaries for corresponding dates.
b Data not available.
c The principal of the Normal School is also principal of the High School.
d German department discontinued.

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TABLE 13.—*Number of teachers in the district, high, and normal schools of St. Louis, Mo., who received the salaries indicated, 1880 to 1889, inclusive.*

Annual salary.	1880.		1881.		1882.		1883.		1884.		1885.		1886.		1887.		1888.		1889.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
$3,000.00	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----
2,750.00	----	----	----	----	----	----	----	----	2	----	2	----	1	----	1	----	1	----	----	----
2,600.00	2	----	2	----	2	----	2	----	----	----	----	----	----	----	----	----	----	----	----	----
2,000.00	21	3	22	3	21	3	23	3	25	3	22	3	23	3	23	4	25	4	24	2
1,900.00	3	1	----	----	4	----	2	----	1	----	1	----	3	----	1	----	1	----	1	2
1,800.00	2	----	6	1	4	1	7	----	7	2	11	2	11	2	9	1	9	1	7	1
1,700.00	3	----	3	----	4	----	----	----	1	1	4	----	1	1	1	1	1	1	2	----
1,600.00	2	----	3	----	----	1	2	1	4	----	1	2	1	----	2	----	2	----	2	----
1,500.00	3	1	3	4	5	4	7	4	1	5	3	5	2	10	4	9	6	8	9	9
1,400.00	----	3	----	----	3	----	----	1	1	2	1	1	2	1	2	----	2	1	----	4
1,350.00	3	----	----	----	----	----	----	----	----	----	----	----	1	----	----	2	----	----	----	----
1,300.00	1	----	2	----	1	1	1	2	2	----	2	----	2	----	1	3	----	3	1	----
1,200.00	3	3	4	4	1	5	2	4	3	7	1	6	3	2	----	----	----	----	1	----
1,150.00	1	3	1	1	----	----	----	----	----	----	1	----	----	----	----	4	----	8	----	2
1,100.00	1	----	----	2	1	2	----	2	1	2	----	2	----	2	2	5	2	5	1	4
1,050.00	----	1	1	----	----	----	1	1	----	----	----	1	1	8	1	5	1	1	1	2
1,000.00	2	----	1	1	3	1	2	----	1	----	6	7	1	1	3	1	4	4	1	1
950.00	2	7	2	5	1	5	----	6	2	6	----	4	1	4	1	13	1	12	----	12
900.00	4	1	3	2	5	2	5	5	4	5	4	1	4	5	2	4	3	4	3	10
850.00	3	59	3	58	6	55	5	49	4	48	3	50	5	43	----	30	----	31	2	34
800.00	3	16	5	14	4	7	6	11	7	11	8	11	9	12	7	15	6	11	5	3
750.00	4	2	4	5	3	4	5	4	3	3	6	5	4	7	1	1	1	2	1	5
700.00	9	95	7	91	10	84	7	709	8	116	6	126	6	134	1	128	1	128	----	122
650.00	4	10	3	11	1	31	2	15	2	16	2	21	----	19	----	7	----	14	1	25
610.00	----	----	----	----	1	19	----	8	----	10	----	8	----	11	----	10	----	11	----	8
605.00	----	16	----	24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
600.00	----	99	----	104	----	96	----	95	1	103	1	94	1	88	----	96	1	96	2	96
570.00	----	----	----	----	----	2	----	2	----	----	1	3	----	5	----	----	----	----	----	1
560.00	----	----	----	----	4	256	11	242	8	225	7	225	6	227	7	307	5	294	4	302
558.75	----	9	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
555.00	1	229	2	267	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
550.00	----	4	----	2	----	1	1	----	----	----	----	1	----	----	----	----	----	----	----	----
530.00	----	----	----	----	----	3	----	----	1	3	----	6	1	4	----	1	----	1	----	----
520.00	----	----	----	----	8	25	----	27	3	28	----	17	4	108	----	66	----	65	----	40
512.50	----	3	----	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
508.75	1	82	2	28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
500.00	2	3	2	5	2	----	1	----	1	1	1	----	2	----	1	----	1	----	----	----
490.00	----	----	----	----	----	1	----	3	----	7	----	5	----	2	----	1	----	1	----	----
480.00	----	----	----	----	----	29	3	29	----	13	4	127	2	50	----	47	----	44	----	35
475.00	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
462.50	4	24	11	27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
450.00	10	36	1	31	1	8	2	10	----	8	----	6	1	7	----	5	----	7	----	6
440.00	----	----	----	----	2	32	----	14	4	146	3	60	1	73	----	35	----	41	----	41
400.00	1	6	3	24	1	100	6	185	2	74	1	89	1	71	1	54	----	80	----	135
375.00	6	4	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
350.00	1	9	1	18	----	26	----	3	----	6	----	3	----	10	----	4	----	5	----	3
325.00	----	12	----	9	----	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----
300.00	----	14	----	8	----	3	----	4	----	3	----	23	----	30	----	32	----	33	----	41
275.00	----	10	----	4	----	4	----	15	----	14	----	1	----	5	----	----	----	----	----	6
256.25	----	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
250.00	----	6	----	4	----	6	----	3	----	1	----	----	----	----	----	----	----	----	----	----
200.00	----	34	----	29	----	22	----	----	----	----	----	35	----	22	----	12	----	37	----	39
175.00	----	----	----	----	----	----	----	33	----	37	----	11	----	8	----	14	----	15	----	9
150.00	----	----	----	----	----	----	----	10	----	16	----	7	----	10	----	8	----	22	----	12
125.00	----	49	----	66	----	90	----	24	----	13	----	----	----	----	----	----	----	----	----	----

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TABLE 14.—*Schedules of salaries of public-school teachers in Boston, Mass., 1849, 1852, 1855, 1857, 1858, and 1859.*

Rank.	Sex.	1849.		1852.				1855.				1857.				1858.				1859.			
		Number.	Salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.
LATIN AND ENGLISH HIGH SCHOOLS.																							
Masters	Male	....	(a)	2	$2,400	.....	.....	2	$2,400	.....	.....	....	$2,400	$100	$2,800	....	$2,400	$100	$2,800	....	$2,400	$100	$2,800
Submasters	Male	....	(a)	3	1,500	.....	.....	3	1,500	$100	$1,800	....	1,600	100	2,000	....	1,600	100	2,000	....	1,600	100	2,000
Ushers	Male	....	(a)	5	800	$100	$1,200	5	1,000	100	1,500	....	1,200	100	1,600	....	1,200	100	1,600	....	1,200	100	1,600
GIRL'S HIGH AND NORMAL SCHOOL.																							
Master	Male	....	(a)	1	(a)	.....	.....	1	2,400	.....	.....	....	2,400	100	2,800	....	2,400	100	2,800	....	2,400	100	2,800
Head assistants	Female	....	(a)	....	(a)	.....	.....	....	500	.....	.....	....	600	.....	.....	....	600	.....	.....	....	600	.....	.....
Assistants	Female	....	(a)	4	(a)	.....	.....	3	450	.....	.....	....	500	.....	.....	....	500	.....	.....	....	500	.....	.....
GRAMMAR SCHOOLS.																							
Masters	Male	34	$1,500	28	1,500	.....	.....	21	1,500	100	1,800	19	1,600	100	2,000	19	1,600	100	2,000	19	1,600	100	2,000
Submasters	Male	4	1,000	8	1,000	.....	.....	11	1,000	100	1,200	13	1,200	100	1,600	14	1,200	100	1,600	14	1,200	100	1,600
Ushers	Male	17	800	12	800	.....	.....	9	700	100	900	9	800	100	1,000	9	800	100	1,000	9	800	100	1,000
Head assistants	Female	2	400	2	400	.....	.....	24	450	.....	.....	32	500	.....	.....	34	500	.....	.....	37	500	.....	.....
Assistants	Female	108	300	134	250	50	350	140	250	50	400	146	300	50	450	157	300	50	450	158	300	50	450
PRIMARY SCHOOLS.																							
Teachers	Female	....	.....	....	.....	.....	.....	195	250	50	400	213	300	50	450	....	300	50	450	....	300	50	450
SPECIAL TEACHERS.																							
Music	Male	....	.....	7	100	.....	.....	5	125	.....	.....	....	125	.....	.....	....	125	.....	.....	....	125	.....	.....
Sewing	Female	....	.....	....	.....	.....	.....	11	200	.....	.....	8	200	.....	.....	2	300	.....	.....	2	300	.....	.....
																....	200			....	200		

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TABLE 15.—*Schedules of salaries of public-school teachers in Boston, Mass., 1860 to 1864, inclusive.*

Rank.	Sex.	1860.				1861.				1862.				1863.				1864.			
		Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.
LATIN AND ENGLISH HIGH SCHOOLS.																					
Masters	Male	2	$2,400	$100	$2,800	2	$2,400	$100	$2,800	2	$2,400	$100	$2,800	2	$2,400	$100	$2,800	2	$2,600	$100	$3,000
Submasters	Male	3	1,600	100	2,000	3	1,600	100	2,000	3	1,600	100	2,000	3	1,600	100	2,000	4	1,800	100	2,200
Ushers	Male	7	1,200	100	1,600	7	1,200	100	1,600	7	1,200	100	1,600	7	1,200	100	1,600	6	1,400	100	1,800
Teacher of French	Male	1	(a)	----	------	1	(a)	----	------	1	450	----	------	1	450	----	------	1	500	----	------
Teacher of drawing	Male	1	(a)	----	------	1	(a)	----	------	1	500	----	------	1	500	----	------	1	500	----	------
GIRLS' HIGH AND NORMAL SCHOOLS.																					
Master	Male	1	2,400	100	2,800	1	2,400	100	2,800	1	2,400	100	2,800	1	2,400	100	2,800	1	2,600	100	3,000
Head assistants	Female	1	600	----	------	1	600	----	------	1	600	----	------	1	600	----	------	1	700	----	------
Assistants	Female	8	500	----	------	8	500	----	------	10	500	----	------	11	500	----	------	11	600	----	------
Assistants, normal department	Female																	1	800	----	------
Teacher of drawing	Male	1	(a)	----	------	1	(a)	----	------	1	800	----	------	1	800	----	------	1	900	----	------
Teacher of French	Male	1	(a)	----	------	1	(a)	----	------	1	450	----	------	1	450	----	------	1	500	----	------
Teacher of German	Male	1	(a)	----	------	1	(a)	----	------	1	450	----	------	1	450	----	------	1	500	----	------
Teacher of music	Male	1	125	----	------	1	125	----	------	1	400	----	------	1	400	----	------	1	450	----	------
GRAMMAR SCHOOLS.																					
Masters	Male	19	1,600	100	2,000	19	1,600	100	2,000	20	1,600	100	2,000	20	1,600	100	2,000	20	1,800	100	2,200
Submasters	Male	15	1,200	100	1,600	15	1,200	100	1,600	15	1,200	100	1,600	14	1,200	100	1,600	14	1,400	100	1,800
Ushers	Male	8	800	100	1,000	7	800	100	1,000	7	800	100	1,000	7	800	100	1,000	8	1,000	100	1,200
Head assistants	Female	39	500	----	------	43	500	----	------	50	500	----	------	50	500	----	------	49	600	----	------
Assistants	Female	164	300	50	450	160	300	50	450	187	300	50	450	188	300	50	450	192	400	50	550
PRIMARY SCHOOLS.																					
Teachers	Female	239	300	50	450	239	300	50	450	250	300	50	450	245	300	50	450	254	400	50	550
SPECIAL TEACHERS.																					
Music	Male	3	125	----	------	3	125	----	------	3	*b* 100	----	------	3	*b* 100	----	------	3	*b* 125	----	------
Music (Primary)	Male																	1	1,200	----	------
Sewing	Female	11	175–300	----	------	12	175–300	----	------	11	175–300	----	------	12	175–300	----	------	12	225–450	----	------
Gymnastics, vocal and physical	Male	----	----	----	------	----	----	----	------	----	----	----	------	----	----	----	------	1	1,500	----	------

a Data not available.

b For each school.

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TABLE 16.—*Schedules of salaries of public-school teachers in Boston, Mass., 1865 to 1869, inclusive.*

Rank.	Sex.	1865.				1866.				1867.				1868.				1869.			
		Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year. (a)	Annual increase. (a)	Maximum salary. (a)
LATIN AND ENGLISH HIGH SCHOOLS.																					
Headmasters	Male									b 2	$3,000	$1000	$4,000	2	$3,000	$1,000	$4,000	2			
Masters	Male	2	$3,100	$100	$3,500	2	$3,100	$100	$3,500	b 5	2,400	600	3,000	5	2,400	600	3,000	4			
Submaster	Male	4	2,100	100	2,500	4	2,100	100	2,500	b 9	1,800	400	2,200	9	2,000	400	2,400	12			
Ushers	Male	7	1,600	100	2,000	9	1,600	100	2,000												
Teacher of French	Male	1	500			1	500			1	500			1	500			1			
Teacher of drawing	Male	1	500			1	500			1	700			1	700						
										1	500			1				1			
GIRLS' HIGH AND NORMAL SCHOOLS.																					
Headmaster	Male									b 1	3,000	1,000	4,000	1	3,000	1,000	4,000	1			
Master	Male	1	3,100	100	3,500	1	3,100	100	3,500												
Head assistants	Female	1	1,000			1	1,000			1	1,500			1	1,500			2			
Assistants	Female	13	800			13	800			10	1,000			10	1,000			12			
Superintendent of normal department	Female	1	1,000			1	1,000			1	1,500			1	1,500			1			
Assistant in normal department	Female	1	800			1	800			1	1,000			1	1,000			1			
Teacher of drawing	Male	1	1,300			1	1,300			1	1,300			1	2,500			1			
Teacher of French	Male	1	500			1	500			1	500			1	500			1			
Teacher of German	Male	1	500			1	500			1	500			1	500			1			
Teacher of music	Male	1	450			1	450			1	450			1	1,000			1			
GRAMMAR SCHOOLS.																					
Masters	Male	20	2,100	100	2,500	21	2,100	100	2,500	21	2,400	600	3,000	22	2,400	600	3,000	28			
Submasters	Male	15	1,600	100	2,000	14	1,600	100	2,000	14	1,800	400	2,200	15	2,000	400	2,400	19			
Ushers	Male	8	1,200	100	1,500	8	1,200	100	1,500	8	1,400	200	1,600	9	1,400	200	1,600	10			
Masters' assistant	Male	1	800			1	800			1	800			1	800			1			
Head assistants	Female	53	700			61	700			64	700			67	700			86			
Assistants	Female	189	450	50	600	196	450	50	600	196	550	100	650	112	550	100	650	251			
PRIMARY SCHOOLS.																					
Teachers	Female	257	450	50	600	256	450	50	600	259	550	100	650	257	550	100	650	307			

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SPECIAL TEACHERS.																					
Music (Grammar schools)	Male	2	*c* 150	.....	.....	1	*c* 150	.....	.....	1	*c* 150	.....	.....	1	*c* 150	.....	.....	3	.....	.....	.....
Music (Primary schools)	Male	1	2,000	.....	.....	1	2,000	.....	.....	1	2,500	.....	.....	1	2,500	.....	.....	1	.....	.....	.....
Sewing (Grammar schools)	Female	12	275–500	.....	.....	11	275–500	.....	.....	12	275–550	.....	.....	11	287.50	.....	.....	15	.....	.....	.....
Gymnastics, vocal and physical	Male	1	3,000	.....	.....	1	3,000	.....	.....	1	3,000	.....	.....	1	3,000	.....	.....	1	.....	.....	.....
Gymnastics, assistant	Male	.....	.....	.....	.....	.....	.....	.....	.....	1	1,800	.....	.....	1	1,800	.....	.....	1	.....	.....	.....

a Data not available.

b There was no reduction of salaries, but an increase: the titles of these teachers were changed, the masters becoming headmasters, the submasters becoming masters, etc. The rank of usher in the high school was discontinued.

c For each school taught.

d For each whole division of the 4th class.

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TABLE 17.—*Schedules of salaries of public-school teachers in Boston, Mass., 1873, and 1876 to 1879, inclusive.*

[NOTE.—These schedules went into effect in September of the years named. The number of teachers in each case is for the term immediately following.]

Rank.	Sex.	1873.			1876.			1877.			1878.				1879.			
		Number.	Salary first year.	Salary second year.	Number.	Salary first year.	Salary second year.	Number.	Salary first year.	Salary second year.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.
Superintendent *a*	Male	1	(*b*)		1	(*b*)		1	(*b*)		1	$4,200			1	$4,200		
Supervisors *c*					6	(*b*)		6	(*b*)		6	3,780			6	3,780		
HIGH AND NORMAL SCHOOLS.																		
Head masters	Male	6	$3,500	$4,000	5	$3,500	$4,000	6	$3,300	$3,780	6	3,780			6	3,780		
Masters	Male	14	2,600	3,000	11	2,800	3,200	11	2,700	3,000	12	*f* 2,880			13	*d* 2,880		
Junior masters	Male										19	1,440	144	*d* $2,880	17	1,440	144	*d* $2,880
Submasters	Male	12	2,200	2,600	13	2,200	2,600	16	2,100	2,400								
Ushers	Male				7	1,700	2,000	4	1,500	1,800								
Assistant principals	Female				1	2,000		1	1,800		1	1,800			1	1,800		
Head assistants	Female	9	1,500	1,500														
Assistants	Female	30	1,000	1,000	1	1,500												
First assistants	Female				3	1,800		5	1,620		5	1,440	36	1,620	5	1,440	36	1,620
Second assistants	Female				4	1,500		4	1,380		5	1,200	36	1,380	4	1,200	36	1,380
Third assistants	Female				4	1,200		8	1,140		9	960	36	1,140	7	960	36	1,140
Fourth assistants	Female				28	1,000		22	900		25	768	36	948	25	768	36	948
Teacher of chemistry	Female		(*b*)		1	1,500		1	1,380		1	1,380			1	1,380		
Assistant teacher of chemistry	Female		(*b*)		1	800		1	750		1	744			1	744		
Assistant teacher of drawing (Roxbury).	Female		(*b*)		1	700		1	600									
Assistant teacher of drawing (girls).	Female		(*b*)		1	1,000		1	900									
Teacher of French (Latin and English).			(*b*)		1	3,200		1	2,400									
Teacher of French (girls)			(*b*)		1	*e* 750		1	*e* 720									
Teacher of French (Dorchester)			(*b*)		1	*e* 600		1	*e* 540									
Teacher of French (Roxbury)			(*b*)		1	*e* 600		1	*e* 540									
Teacher of French (Charlestown)			(*b*)		1	*e* 600		1	*e* 660									
Teacher of French (Brighton)			(*b*)		1	*e* 250		1	*e* 250									
Teacher of German (Latin)			(*b*)		1	*e* 200		1	*e* 200									
Teacher of German (girls)			(*b*)		1	*e* 750		1	*e* 720									
Teacher of German (Dorchester)			(*b*)		1	*e* 600												
Teacher of German (Roxbury)			(*b*)		1	*e* 600		1	1,500									
Teacher of German (West Roxbury).			(*b*)		1	*e* 500												
Extra teacher of mathematics			(*b*)		1	1,000												
Instructor of military drill	Male		(*b*)		1	1,500		1	1,500		1	1,500			1	1,500		
Physical culture (girls)	Female				1	600		1	600		1	744			1	744		

$90 per annum for each hour of actual service per week.

		1878			1879			1880			1881			1882		
GRAMMAR SCHOOLS.																
Masters	Male	37	2,600	3,200	40	2,800	3,200	41	2,700	3,000	41	2,580	60	2,880	42	2,580	60	2,880
Submasters	Male	21	2,200	2,600	27	2,200	2,600	27	2,160	2,400	28	1,980	60	2,280	28	1,980	60	2,280
Second submasters	Male										16	1,500	60	1,800	15	1,500	60	1,800
Ushers	Male	10	1,700	2,000	17	1,700	2,000	17	1,500	1,800								
Masters' assistants	Female	30	1,200	1,200														
Head assistants	Female	67	850	850														
Assistants	Female	301	700	800														
First assistants	Female				39	1,200		45	1,140		62	900	36	1,080	62	900	36	1,080
Second first assistants	Female				9	1,000		11	852									
Second assistants	Female				78	850		76	792		74	756	12	816	75	756	12	816
Third assistants	Female				327	600	*f* 700	324	540	*g* 660	335	504	48	744	358	504	48	744
PRIMARY SCHOOLS.																
Teachers (fourth assistants)	Female	340	600	*f* 700	404	600	*f* 700	410	540	*g* 660	408	504	48	744	406	504	48	744
SPECIAL TEACHERS.																
Music, director	Male	1	(*b*)		1	3,300		1	3,000		1	3,000			1	3,000		
Music, special instructors	Male	4	(*b*)		5	3,000		5	2,400		3	2,640			3	2,640		
					1	1,800		1	1,320									
Drawing, director	Male	1	(*b*)		1	3,300		1	3,000		1	3,000			1	3,000		
Drawing, special instructors		7	(*b*)		3	2,500		3	2,180		2	2,280			2	2,280		
					1	1,700		1	1,320		1	1,500			1	1,500		
Sewing	Female	20	(*b*)		27	*h* 87.50 to 800		28	*h* 100 to 750		28	*h* 108 to 744			28	*h* 108 to 744		
Physical and vocal culture	Male	1	(*b*)															
Kindergarten	Female	1	(*b*)		1	600	*f* 700	1	540	*g* 660	1				1			
Kindergarten assistant	Female				1	400		1			1				1			
Teachers of licensed minors	Female	2	(*b*)		2	600	*f* 700	2	540	*g* 660	2				2			
DEAF-MUTE SCHOOL. (*i*)																
Principal	Female	1	(*b*)		1	1,500		1	1,500		1	1,500			1	1,800		
First assistant	Female				1	900		1	900		1	900			1	900		
Assistants	Female	6	(*b*)		6	700	800	6	700	800	7	700	100	800	7	700	100	800
EVENING SCHOOLS.																
Principal, high schools	Male				1	*j* 10		1	*j* 10		(*b*)	*j* 10			(*b*)	*k* 50		
Assistants, high schools					(*b*)	*j* 5		(*b*)	*j* 4		(*b*)	*j* 5			(*b*)	*k* 25		
Principals, drawing schools		2	(*b*)		1	*j* 10		1	*j* 7		(*b*)	*j* 10			(*b*)	*j* 10		
Head assistant, drawing schools								5	*j* 5		(*b*)	*j* 6			(*b*)	*j* 6		
Assistants, drawing schools		10	(*b*)		4	*j* 5		(*b*)	*j* 5		(*b*)	*j* 5			(*b*)	*j* 5		
Principals, elementary schools					16	*j* 3		16	*j* 3		(*b*)	*j* 3			(*b*)	*k* 20		
Assistants, elementary schools					(*b*)	*j* 1		(*b*)	*j* 1.25		(*b*)	*j* 1.25			(*b*)	*k* 10		

a This office was created in 1851, but the salary during the years previous to 1878 is not stated.
b Data not available.
c Office created in 1876.
d Junior masters rank as masters after ten years' service.
e For a part of the time only.
f Salary third year and after, $800.
g Salary third year and after, $750.
h Salary proportioned to the number of divisions taught.
i Subsequently called the Horace Mann School for the Deaf.
j Per evening.
k Per week.

TABLE 18.—*Schedules of salaries of public-school teachers in Boston, Mass., 1880 to 1884, inclusive.*

[NOTE.—These schedules went into effect in the year named. The number of teachers in each case is for the term immediately following.]

Rank.	Sex.	1880.				1881.				1882.				1883.				1884.			
		Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.
Superintendent	Male	1	$4,200	.....	.....	1	$4,200	.....	.....	1	$4,200	.....	.....	1	$4,200	.....	.....	1	$4,200	.....	.....
Supervisors		6	3,780	.....	.....	6	3,780	.....	.....	6	3,780	.....	.....	6	3,780	.....	.....	6	3,780	.....	.....
HIGH AND NORMAL SCHOOLS.																					
Head masters	Male	6	3,780	.....	.....	5	3,780	.....	.....	5	3,780	.....	.....	5	3,780	.....	.....	5	3,780	.....	.....
Masters	Male	15	*a* 2,880	.....	.....	17	*b* 2,880	.....	.....	20	*b* 2,880	.....	.....	19	*b* 2,880	.....	.....	24	*b* 2,880	.....	.....
Junior masters	Male	15	1,440	$144	*a* $2,880	13	1,008	$144	*b* $2,880	10	1,008	$144	*b* $2,880	11	1,008	$144	*b* $2,880	9	1,008	$144	*b* $2,880
Assistant principal	Female	1	1,800	.....	.....	1	1,800	.....	.....	1	1,800	.....	.....	1	1,800	.....	.....	1	1,800	.....	.....
First assistants	Female	5	1,440	36	1,620	5	1,440	36	1,620	5	1,440	36	1,620	5	*c* 1,440	36	1,620	5	*c* 1,440	36	1,620
Second assistants	Female	5	1,200	36	1,380	5	1,200	36	1,380	5	1,200	36	1,380	.....	.....	.....	.....	.....	.....	.....	.....
Third assistants	Female	10	960	36	1,140	9	960	36	1,140	11	960	36	1,140	.....	.....	.....	.....	.....	.....	.....	.....
Fourth assistants	Female	19	708	36	948	18	708	36	948	19	708	36	948	.....	.....	.....	.....	.....	.....	.....	.....
Assistants	Female													35	756	48	1,380	40	756	48	1,380
Teacher of chemistry (girls).	Female	1	1,380	.....	.....	1	1,380	.....	.....	1	1,380	.....	.....	1	1,380	.....	.....	1	1,380	.....	.....
Assistant teacher of chemistry (girls).	Female	1	744	.....	.....	1	744	.....	.....	1	744	.....	.....	1	744	.....	.....	1	744	.....	.....
Teacher of physical culture (girls).		1	744	.....	.....	1	744	.....	.....	1	744	.....	.....	1	960	.....	.....	1	960	.....	.....
Teacher of physical culture (girls' Latin).		1	492	.....	.....	1	492	.....	.....	1	492	.....	.....	1	492	.....	.....	1	492	.....	.....
Teacher of sciences (East Boston and West Roxbury).		1	948	.....	.....	1	948	.....	.....	1	400	.....	.....	1	400	.....	.....	1	400	.....	.....
Teacher of drawing, penmanship, and elementary methods (normal).		1	1,380	.....	.....	1	1,380	.....	.....	1	1,380	.....	.....	1	1,380	.....	.....	1	1,380	.....	.....
Teachers of modern languages.		7	(*d*)	.....	.....	7	(*d*)	.....	.....	6	(*d*)	.....	.....	6	(*d*)	.....	.....	5	(*d*)	.....	.....
Instructor of military drill.	Male	1	1,500	.....	.....	1	1,500	.....	.....	1	1,500	.....	.....	1	1,500	.....	.....	1	1,500	.....	.....
GRAMMAR SCHOOLS.																					
Masters	Male	43	2,580	60	2,880	44	2,580	60	2,880	43	2,580	60	2,880	42	2,580	60	2,880	43	2,580	60	2,880
Submasters	Male	29	1,980	60	2,280	42	1,980	60	2,280	46	1,500	60	2,280	47	1,500	60	2,280	47	1,500	60	2,280

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Second submasters	Male	14	1,500	60	1,800																
First assistants	Female	65	900	36	1,080	65	900	36	1,080	68	900	36	1,080	68	900	36	1,080	70	900	36	1,080
Second assistants	Female	76	756	12	816	77	756	12	816	76	756	12	816	77	756	12	816	82	756	12	816
Third assistants	Female	361	504	48	744	361	456	48	744	368	456	48	744	368	456	48	744	377	456	48	744
PRIMARY SCHOOLS.																					
Second assistants	Female										756	12	816		756	12	816		756	12	816
Fourth assistants	Female	407	504	48	744	422	456	48	744	442	456	48	744	464	456	48	744	453	456	48	744
Special assistants	Female		*e* 5				*e* 5				*e* 5				*e* 5				*e* 5		
SPECIAL TEACHERS.																					
Music, director	Male	1	3,000			1	3,000			1	3,000			1	3,000						
Music, special instructors	Male	3	2,640			3	2,640			3	2,640			3	2,640			5	2,640		
Drawing, director	Male	1	3,000			1	3,000			1	3,000			1	3,000			1	3,000		
Drawing, special instructors		2	2,280																		
		1	1,500																		
Sewing	Female	28	*f* 108 to 744			28	*f* 108 to 744			28	*f* 108 to 744			28	*f* 108 to 744			28	*f* 108 to 744		
HORACE MANN SCHOOL FOR THE DEAF.																					
Principal	Female	1	1,800			1	1,800			1	1,800			1	1,800			1	1,800		
First assistant	Female	1	900			1	900			1	900			1	900			1	900		
Assistants	Female	7	700	100	800	7	700	100	800	7	700	100	800	7	700	100	800	7	700	100	800
EVENING SCHOOLS.																					
Principal, high school		1	*e* 50			1	*e* 30			1	*e* 30			1	*e* 50			1	*e* 30	*e* 10	*e* 50
Assistants, high school		8	*e* 25			8	*e* 20			10	*e* 20			10	*e* 20			21	*e* 20		
Principals, elementary schools.		17	*e* 20			12	*e* 20			(*g*)	*e* 20			(*g*)	*e* 20			(*g*)	*e* 20		
Assistants, elementary schools.		(*g*)	*e* 7½			(*g*)	*e* 7½			(*g*)	*e* 7½			(*g*)	*e* 7½			(*g*)	*e* 7½		
Masters, drawing schools		(*g*)	*h* 10			(*g*)	*h* 10			(*g*)	*h* 10			(*g*)	*h* 10			(*g*)	*h* 8	*h* 1	*h* 10
Head assistants, drawing schools.		(*g*)	*h* 6			(*g*)	*h* 6			(*g*)	*h* 6			(*g*)	*h* 6			(*g*)	*h* 6		
Assistants, drawing schools.		(*g*)	*h* 5			(*g*)	*h* 5			(*g*)	*h* 5			(*g*)	*h* 5			(*g*)	*h* 5		

a Junior masters rank as master after 9 years' service.
b Junior masters rank as master after 13 years' service.
c This grade is to be abolished when the incumbents retire.
d $80 per year for each hour of actual service per week.
e Per week.
f Salary proportioned to the number of divisions taught.
g Data not available.
h Per evening.

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TABLE 19.—*Schedules of salaries of public-school teachers in Boston, Mass., 1885 to 1889, inclusive.*

Rank.	Sex.	1885.				1886.				1887.				1888.				1889.			
		Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.
Superintendent	Male	1	$4,200	----	-------	1	$4,200	----	-------	1	$4,200	----	-------	1	$4,200	----	-------	1	$4,200	----	-------
Supervisors	----------	6	3,780	----	-------	6	3,780	----	-------	6	3,780	----	-------	6	3,780	----	-------	6	3,780	----	-------
NORMAL SCHOOL.																					
Head master	Male	1	3,780	----	-------	1	3,780	----	-------	1	3,780	----	-------	1	3,780	----	-------	1	3,780	----	-------
First assistant	Female	1	1,440	$36	$1,620	1	1,440	$36	$1,620	1	1,440	$36	$1,620	1	1,440	$36	$1,620	1	1,440	$36	$1,620
Second assistants	Female	----	-------	----	-------	2	1,140	48	1,380	2	1,140	48	1,380	2	1,140	48	1,380	4	1,140	48	1,380
Assistant	Female	1	256	48	1,380	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------
Teacher of drawing, etc	Female	1	828	----	-------	1	828	----	-------	1	828	----	-------	1	828	----	-------	1	1,080	----	-------
HIGH SCHOOLS.																					
Head masters	Male	4	3,780	----	-------	5	3,780	----	-------	5	3,780	----	-------	5	3,780	----	-------	5	3,780	----	-------
Masters	Male	24	*a* 2,880	----	-------	21	*a* 2,880	----	-------	21	*a* 2,880	----	-------	21	*a* 2,880	----	-------	23	*a* 2,880	----	-------
Junior masters	Male	9	1,008	144	*a*2,880	12	1,008	144	*a*2,880	14	1,008	144	*a*2,880	18	1,008	144	*a*2,880	19	1,008	144	*a* 2,880
Assistant principal	Female	1	1,800	----	-------	1	1,800	----	-------	1	1,800	----	-------	1	1,800	----	-------	1	1,800	----	-------
First assistants	Female	4	*b* 1,440	36	1,620	3	*b* 1,620	----	-------	3	*b* 1,620	----	-------	2	*b* 1,620	----	-------	2	*b* 1,620	----	-------
Assistants	Female	40	756	48	1,380	45	756	48	1,380	46	756	48	1,380	45	756	48	1,380	49	756	48	1,380
Teacher of chemistry (girls')	Female	1	1,380	----	-------	1	1,380	----	-------	1	1,380	----	-------	1	1,380	----	-------	1	1,380	----	-------
Assistant teacher of chemistry (girls').	Female	1	744	----	-------	1	744	----	-------	1	744	----	-------	1	744	----	-------	1	744	----	-------
Teacher of physical culture (girls')	Female	1	960	----	-------	1	960	----	-------	1	960	----	-------	1	960	----	-------	1	960	----	-------
Teacher of physical culture (girls' Latin).	Female	1	492	----	-------	1	492	----	-------	1	492	----	-------	1	492	----	-------	1	492	----	-------
Teacher of physics (boys' Latin)	Male	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	1	1,584	----	-------	1	1,584	----	-------
Director of French and German	Male	----	-------	----	-------	----	-------	----	-------	1	3,000	----	-------	1	3,000	----	-------	1	3,000	----	-------
Assistants in French and German	Male	5	(*c*)	----	-------	5	(*c*)	----	-------	2	1,000	----	-------	2	1,500	----	-------	2	1,500	----	-------
Instructor of military drill	Male	1	1,500	----	-------	1	1,500	----	-------	1	1,500	----	-------	1	2,000	----	-------	1	2,000	----	-------
Teacher of sciences (East Boston and West Roxbury).	Male	1	400	----	-------	1	400	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------
GRAMMAR SCHOOLS.																					
Masters	Male	44	2,580	60	2,880	47	2,580	60	2,880	49	2,580	60	2,880	51	2,580	60	2,880	51	2,580	60	2,880
Submasters	Male	46	1,500	60	2,280	44	1,500	60	2,280	44	1,500	60	2,280	46	1,500	60	2,280	49	1,500	60	2,280
First assistants	Female	71	900	36	1,080	72	900	36	1,080	72	900	36	1,080	75	900	36	1,080	77	900	36	1,080
Second assistants	Female	83	756	12	816	83	756	12	816	85	756	12	816	85	756	12	816	85	756	12	816
Third assistants	Female	383	456	48	744	390	456	48	744	396	456	48	744	399	456	48	744	420	456	48	744

PRIMARY SCHOOLS.																				
Second assistants	Female	455	756	12	816	463	756	12	816	467	756	12	816	470	756	12	816	468	756	12	816
Fourth assistants	Female		456	48	744		456	48	744		456	48	744		456	48	744		456	48	744
Special assistants	Female		*d* 5				*d* 5				*d* 5				*d* 5				*d* 5		
KINDERGARTENS.																				
Principals	Female																	22	600	36	708
Assistants	Female																	19	432	36	540
SPECIAL TEACHERS.																				
Music	Male	5	2,640			5	2,640			5	2,640			5	2,640			5	2,640		
Drawing	Male	1	3,000			1	3,000			1	3,000			1	3,000			1	3,000		
Hygiene	Male	1	3,000			1	3,000			1	3,000			1	3,000			1	3,000		
Manual training	Male	1	1,200			1	1,200			1	1,200			1	1,200			1	1,200		
Cookery	Female					1	456	48	744	1	456	48	744	2	456	48	744	5	456	48	744
Sewing	Female	28	*e*108 to 744			28	*e*108 to 744			29	*e*108 to 744			30	*e*108 to 744			30	*e*108 to 744		
HORACE MANN SCHOOL FOR THE DEAF.																				
Principal	Female	1	1,800			1	1,800			1	1,800			1	1,800			1	1,800		
First assistant	Female	1	900			1	900			1	900			1	900			1	900		
Assistants	Female	7	700	100	800	7	700	100	800	7	700	100	800	7	700	100	800	7	700	100	800
EVENING SCHOOLS.																				
Principal, high school	Male	1	*d* 30	*d*10	*d* 50	1	*d* 30	*d*10	*d* 50	1	*d* 30	*d*10	*d* 50	1	*d* 30	*d*10	*d* 50	1	*d* 30	*d*10	*d* 50
Assistants, high school		21	*f* 4			23	*f* 4			19	*f* 4			19	*f*4			24	*f*4		
Principals, elementary schools	Male	13	*f* 4			13	*f* 4			14	*f* 4			13	*f*4			15	*f*4		
First assistants, elementary schools.																		98	*f* 2.50		
Assistants, elementary schools		73	*f* 1.50			79	*f* 1.50			81	*f* 1.50			81	*f* 1.50			98	*f* 1.50		
Masters, drawing schools	Male	20	*f* 8	*f*1	*f* 10	21	*f* 8	*f*1	*f* 10	23	*f* 8	*f*1	*f* 10	23	*f* 8	*f*1	*f* 10	23	*f* 8	*f*1	*f* 10
Head assistants, drawing schools			*f* 6				*f* 6				*f* 6				*f* 6				*f* 6		
Assistants, drawing schools			*f* 5				*f* 5				*f* 5				*f* 5				*f* 5		

a Junior masters rank as masters after thirteen years' service.
b This grade will be discontinued when the incumbents retire.
c Ninety dollars per year for each hour of actual service per week.
d Per week.
e Salary proportioned to the number of divisions taught.
f Per evening.

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Rank.	Sex.	1890.				1891.				1892.			
		Number.	Salary first year.	Annual increase.	Maximum salary.	Number.	Salary first year.	Annual increase.	Maximum salary.	Number.g	Salary first year.	Annual increase.	Maximum salary.
Superintendent	Male	1	$4,200			1	$4,200			1	$4,200		
Supervisors		6	3,780			6	3,780			6	3,780		
NORMAL SCHOOL.													
Head master	Male	1	3,780			1	3,780				3,780		
Submaster	Male	1	2,196	$60	$2,496	1	2,196	$60	$2,496		2,196	$60	$2,496
First assistant	Female	1	1,440	36	1,620	1	1,440	36	1,620		1,440	36	1,620
Second assistants	Female	4	1,140	48	1,380	4	1,140	48	1,380		1,140	48	1,380
Teacher of drawing, etc	Female	1	1,080			1	1,080						
Teacher of kindergarten methods	Female					1	1,080			1	1,080		
HIGH SCHOOLS.													
Head masters	Male	6	3,780			6	3,780				3,780		
Masters	Male	22	a 2,880			22	a 2,880				a 2,880		
Junior masters	Male	21	1,008	144	a 2,880	25	1,008	144	a 2,880		1,008	144	a 2,880
Assistant principal	Female	1	1,800			1	1,800				1,800		
First assistants	Female	2	b 1,620			2	b 1,620				b 1,620		
Assistants	Female	48	756	48	1,380	50	756	48	1,380		756	48	1,380
Teacher of chemistry (girls')	Female	1	1,620			1	1,620			1	1,620		
Assistant teacher of chemistry (girls')	Female	1	804			1	804			1	804		
Teacher of physical culture (girls')	Female	1	960			1	1,008			1	1,008		
Teacher of physical culture (girls' Latin)	Female	1	492			1	492			1	492		
Director of French and German	Male	1	3,000			1	3,000			1	3,000		
Assistants in French and German	Male	2	1,500			c 2	1,500				1,500		
Instructor in military drill	Male	1	2,000			1	2,000			1	2,000		
GRAMMAR SCHOOLS.													
Masters	Male	52	2,580	60	2,880	52	2,580	60	2,880		2,580	60	2,880
Submasters	Male	50	1,500	60	2,280	52	1,500	60	2,280		1,500	60	2,280
First assistants	Female	79	900	36	1,080	79	900	36	1,080		900	36	1,080
Second assistants	Female	85	756	12	816	90	756	12	816		756	12	816
Third assistants	Female	419	456	48	744	414	456	48	744		456	48	744
PRIMARY SCHOOLS.													
Second assistants	Female	480	756	12	816	470	756	12	816		756	12	816
Fourth assistants	Female		456	48	744		456	48	744		456	48	744
Special assistants	Female		d 5				d 5						
KINDERGARTENS.													
Principals	Female	25	600	36	708	31	600	36	708		600	36	708

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Assistants	Female	21	432	36	540	25	432	36	540		432	36	540
Special assistants	Female		*d* 5										
MANUAL-TRAINING SCHOOLS.													
Instructors	Male	1	1,200			2	1,200			1	1,620		
										1	1,200		
Assistant instructors	Male										800		
SCHOOLS OF COOKERY.													
Principal	Female										1,000		
Instructors	Female	6	456	48	744	7	456	48	744		456	48	744
SPECIAL TEACHERS.													
Music	Male	5	2,640			5	2,640				2,640		
Drawing director	Male	1	3,000			1	3,000			1	3,000		
Drawing assistant	Male									1	1,800		
Physical-training director	Male					1	3,000			1	3,000		
Physical-training assistant	Male					1	2,000			1	2,000		
Sewing	Female	29	*e* 108 to 744			29	*e* 108 to 744				*e* 108 to 744		
HORACE MANN SCHOOL FOR THE DEAF.													
Principal	Female	1	2,508			1	2,508			1	2,508		
First assistant	Female	1	900			1	900			1	900		
Assistants	Female	8	700	100	800	9	700	100	800		700	100	800
EVENING SCHOOLS.													
Principal, high school		1	*d* 30	*d* 10	*d* 50	1	*d* 30	*d* 10	*d* 50		*d* 30	*d* 10	*d* 50
Assistants, high school		29	*f* 4			31	*f* 4				*f* 4		
Principals, elementary schools of over 100 pupils		16	*f* 5			16	*f* 5				*f* 5		
Principals, elementary schools of less than 100 pupils			*f* 4				*f* 4				*f* 4		
First assistants, elementary schools of less than 100 pupils		113	*f* 2.50			110	*f* 2.50				*f* 2.50		
Assistants, elementary schools of less than 100 pupils			*f* 1.50				*f* 1.50				*f* 1.50		
Masters, drawing schools		23	*f* 8	*f* 1	*f* 10	24	(*g*)				*b f* 10		
Principals, drawing schools			(*g*)				(*g*)				*f* 7	*f* 1	*f* 8
Head assistants, drawing schools			*f* 6				(*g*)				*f* 6		
Assistants, drawing schools			*f* 5				(*g*)				*f* 5		

a Junior masters rank as masters after thirteen years' service.
b This grade will be discontinued when the incumbents retire.
c There is also one special teacher of German who receives $4 a week for three hours' actual service per week.
d Per week.
e Salary proportioned to the number of divisions taught.
f Per evening.
g Data not available.

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TABLE 21.—*Salaries of public-school teachers in New Orleans, La., 1843, 1844, 1855, 1856, 1858, 1860, 1867, 1868.*

Rank.	Sex.	1843.		1844.		1855.		1856.		1858.		1860.		1867.		1868.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
Superintendent	Male	1	$2,500	1	$2,500	1	$2,300	1	$2,500	1	$2,500	1	$2,500	1	$4,000	1	$4,000
Principals	Female	1	1,000														
Assistants	Male	1	1,200	1	840												
				2	800												
Assistants	Female	10	500	1	780												
				1	720												
				1	600												
				1	540												
				3	500												
				4	420												
				7	360												
BOYS' HIGH SCHOOLS.																	
Principals	Male					1	700	1	1,800	1	2,000	1	2,280	2	2,000	1	2,500
Assistants	Male					1	1,320		1,500	1	1,800	4	1,500	4	1,500	5	1,800
						1	750		700	1	700	1	1,200	1	1,200		
						1	500					1	1,020	1	1,020		
GIRLS' HIGH SCHOOLS.																	
Principals	Female					1	1,100	1	1,200	1	1,260	1	1,260	2	1,200	2	1,200
Assistants	Female					1	1,000	1	1,050	1	1,080	1	1,080	1	1,260	8	1,020
						1	960	1	1,000	1	1,020	1	1,020	7	1,020	1	900
						1	500	1	600	1	600	1	720	1	240		
												1	600				
GRAMMAR SCHOOLS.																	
Principals	Male					4	1,230	5	1,320	5	1,500	5	1,500	15	1,500	15	1,500
																3	1,200
Principals	Female					5	920	5	1,000	5	1,020	5	1,020	18	1,200	29	1,200
														1	1,020	1	960
														1	960	1	942
														1	800	3	1,000
First assistants	Male					5	920	5	1,000	5	1,000	1	1,200	5	1,000	4	1,000
												4	1,000			2	960
First assistants	Female					6	675	6	800	1	900	1	900	14	1,000	16	1,000
										6	800	6	800	1	900	6	960
														18	800	31	800
														4	720	1	720
Assistants	Female					10	550	10	600	40	600	41	600				
						28	540					1	540				
Second assistants	Female													58	660	64	660
																10	600

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Third assistants	Female													96	600	112	600
French teachers	Female													4	300		
PRIMARY SCHOOLS.																	
Teachers	Female							28	600								
NIGHT SCHOOLS.																	
Principals	Male					1	*a* 35										
Principals	Female					1	*a* 30										
Assistants	Male					2	*a* 30										
Assistants	Female					1	*a* 25										

a Per month.

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TABLE 22.—*Salaries of public school teachers in New Orleans, La., 1878, 1881, 1884, 1886, 1888.*

Rank.	Sex.	1878.		1881.		1884.		1886.		1888.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
BOYS' HIGH SCHOOLS.											
Principal	Male	1	$1,620	1	$1,620	1	$1,620	1	$1,215	1	$1,215
Associates	Male	3	1,152	1	1,452	1	1,452	1	1,125	1	1,125
				1	1,152	1	1,152	3	900	3	900
GIRLS' HIGH SCHOOLS.											
Principal	Female	1	1,500	1	1,500	1	1,500	1	1,125	1	1,125
Associates	Female	1	1,200	1	1,200	1	1,200	1	975	1	975
		5	900	3	900	3	900	2	675	2	675
								1	594	1	594
								1	495	1	495
										1	450
										1	405
GRAMMAR SCHOOLS.											
Principals	Male	20	840	14	1,020	12	1,200	a15	900	a15	900
				5	960	5	960	a10	720	a11	720
								a14	675	a14	675
Principals	Female	1	840	1	1,020	2	1,020	a3	630	a3	630
		23	720	2	960	1	960	a4	540	a5	540
		6	564	13	864	13	864			a6	495
				14	792	17	792				
						1	648				
First assistants	Female	65	540	3	720	2	720	72	495	64	495
				67	648	66	648				
Second assistants	Female	101	396	2	600	98	540	100	405	102	405
				102	540						
Third assistants	Female	172	324	163	420	153	420	162	360	169	360
PRIMARY SCHOOLS.											
Principals	Female	13	540	2	648	2	648	.....	.....	.....	.....
		2	384	1	480						
First assistants	.....	1	432	.....	.....	.....	.....	.....	.....	.....	.....
Second assistants	.....	7	360	.....	.....	.....	.....	.....	.....	.....	.....
Third assistants	.....	5	324	1	420	1	420	.....	.....	.....	.....
SPECIAL PRIMARY.											
Principal	Female	1	672	1	720	1	720	.....	.....	.....	.....
First assistant	Female	1	540	1	648	2	648	.....	.....	.....	.....
Second assistant	Female	1	480	1	540	1	540	.....	.....	.....	.....
COLORED HIGH SCHOOL.											
Principal	Male	1	1,140	.....	.....	.....	.....	.....	.....	.....	.....
Associate	Female	1	780	.....	.....	.....	.....	.....	.....	.....	.....
NORMAL SCHOOLS.											
Principal	Female	.....	.....	.....	.....	.....	.....	1	315	1	360
Associates	Female	.....	.....	.....	.....	.....	.....	2	225	2	270
DEAF-MUTE SCHOOL.											
Principal	.....	.....	.....	.....	.....	.....	.....	1	450	1	675

a Sex not stated.

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TABLE 23.—*Salaries of public school teachers in Cincinnati, Ohio, 1834, 1836, 1839.*

Rank.	Sex.	1834.		1836.		1839.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
DISTRICT SCHOOLS.							
Principals	Male	------	$400	14	$500	------	$540
						------	504
Principals, female departments	Female	------	216	4	250	------	300
Assistants	Male	------	250	10	300	------	------
Assistants	Female	------	168	15	200	------	------
First assistants	Male	------	------	------	------	------	340
First assistants	Female	------	------	------	------	------	240
Second assistants	Male	------	------	------	------	------	204
Second assistants	Female	------	------	------	------	------	216
Third assistants	Female	------	------	------	------	------	180

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TABLE 24.—*Salaries of public-school teachers in Cincinnati, Ohio, 1840 to 1849, inclusive.*

Rank.	Sex.	1840.		1841.		1842.		1843.		1844.		1845.		1846.		1847.		1848.		1849.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
CENTRAL SCHOOL (*a*)																					
Principal	Male																	1	$1,000	1	$1,500
Assistants	Male																	1	660	2	800
																		1	600		
Assistant	Female																	1	360		
DISTRICT SCHOOLS.																					
Principals	Male	5	$540		$540	9	$540	9	$540	10	$540	10	$540	10	$540	13	$600	13	600	13	780
		8	504			2	420	1	420	1	420	1	456	1	456						
								1	360	1	360	1	396	1	396						
Associate principals	Male	2	420		(*b*)																
Principals of female departments	Female	8	300		(*b*)	9	300	9	300	9	300	9	300	10	300	10	336	12	336	13	420
First assistants	Male	3	360		(*b*)	2	360	1	360	1	360	1	360	1	360						
						3	300	6	300	8	300	10	300	8	300						
First assistants	Female	15	240		240	19	216	23	216	22	216	1	300	29	216						
												26	216								
Second assistants	Male	3	300		(*b*)	4	240	1	240												
								1	180												
Second assistants	Female	12	216		(*b*)	13	180	19	180	31	180	28	180	32	180						
Third assistant	Male					1	156														
Third assistants	Female	5	180		180	9	156	2	180												
Assistants	Male															13	360	4	420	9	540
																		10	360	5	420
Assistants	Female															10	240	9	240	8	300
																26	216	28	216	12	240
																28	192	36	192	20	216
																				37	*c* 192
SPECIAL TEACHERS.																					
Penmanship	Male							1	540	1	540	1	540	1	540			1	600	1	780
																		1	360	1	420
Music	Male									1	540	1	540	1	540			3	324	3	324
Music	Female									1	144	1	144	1	144						
Drawing	Male																	1	600		

a Established 1847. *b* Data not available. *c* For first six months only.

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TABLE 25.—*Salaries of public-school teachers in Cincinnati, Ohio, 1850 to 1859, inclusive.*

Rank.	Sex.	1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.		1859.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
HUGHES AND WOODWARD HIGH SCHOOLS. (*a*)																					
Principals	Male	*a*1	$1,500	----	(*b*)	----	(*b*)	2	$1,500	2	$1,500	----	(*b*)	----	(*b*)	----	(*b*)	2	$1,750	2	$1,750
Assistants	Male	*a*2	800	----	(*b*)	----	(*b*)	1	1,300	2	1,040	----	(*b*)	----	(*b*)	----	(*b*)	2	1,320	2	1,320
								2	1,040	1	1,000							2	1,200	2	1,200
								1	*c* 600	1	*c* 600							1	*c* 570	1	*c* 572
								1	480	1	480							1	*c* 210	1	*c* 400
								1	*c* 200	2	*c* 200							1	*c* 100	1	*c* 212
Assistants	Female	*a*1	500	----	(*b*)	----	(*b*)	1	600	1	800	----	(*b*)	----	(*b*)	----	(*b*)	2	1,000	1	1,000
								1	504	1	600							1	700	1	800
								2	360	1	504							1	504	1	700
										1	450										
										1	360										
INTERMEDIATE SCHOOLS. (*d*)																					
Principals	Male	----	----	----	----	----	----	----	----	----	----	----	----	4	$1,020	----	$1,320	4	1,320	4	1,320
Assistants	Male	----	----	----	----	----	----	----	----	----	----	----	----	2	780	----	800	4	800	4	800
														1	552			*e*2	450	*e*3	450
														*e*1	360			*e*2	400	*e*1	400
																		*e*3	300	*e*2	300
First assistants	Female	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	600	4	600	4	600
Assistants	Female	----	----	----	----	----	----	----	----	----	----	----	----	2	504	SSS	450	2	450	2	450
														6	420		400	3	400	1	400
														2	360		300			1	300
														1	300						
DISTRICT SCHOOLS.																					
Principals	Male	12	780	14	$780	14	$780	14	1,020	14	1,020	----	1,020	11	1,020	----	1,200	13	1,200	14	1,200
		1	540											1	900			3	1,000	2	1,000
														2	840						
Principals female departments *g*	Female	13	420	13	420	13	420	14	504	13	504	----	(*b*)	13	504	----	*g*600	13	*g*600	13	*g* 600
Assistants	Male	7	540	10	540	1	780	10	780	16	780	----	(*b*)	7	780	----	*h*900	*h* 6	900	6	*h* 900
		12	420	9	420	10	540	12	552	6	552			5	552		800	10	800	10	800
						9	420			*e*1	504			2	300		600	3	600	2	600
														*d*3	240		*h*552	3	552	3	*h* 552

a Figures for 1850 are for the Central School.
b Data not available.
c For only a part of each day.
d Established 1855.
e Males elected to places provided for females.
f One-third of the whole number.
g Called first assistant after 1856.
h German assistants.

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TABLE 25.—*Salaries of public-school teachers in Cincinnati, Ohio, 1850 to 1859, inclusive*—Continued.

Rank.	Sex.	1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.		1859.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
DISTRICT SCHOOLS—continued.																					
Assistants	Male																	*a* 1	$420	*a* 3	$360
																		a 1	360	*a* 2	300
																		a 1	300	*a* 2	240
																		a 1	240		
Assistants	Female	13	$300	1	$420	1	$420	35	$360	42	$360	----	(*b*)	20	$360	(*c*)	$420	16	420	23	420
		23	240	16	300	26	300	53	288	58	288			58	300	(*c*)	360	55	360	72	360
		14	216	32	240	45	240	28	*d* 240	30	*d* 240			12	288	----	300	73	200	65	300
		35	*d* 192	4	216	2	216							72	*d* 240	----	*d* 240	20	*d* 240	20	*d* 240
				46	*d* 192	34	*d* 192														
SPECIAL TEACHERS.																					
Penmanship	Female																	1	1,000	1	1,000
Music	Male	1	576	1	576	1	612	1	796	1	796	----	(*b*)	----	----	----	----	3	1,200	4	1,200
		1	540	1	540	1	468	1	608	1	608							1	*e* 960		
COLORED SCHOOL.																					
Teachers	Male	----	----	----	----	----	----	3	420	1	540	----	(*b*)	1	780	----	----	----	----	----	----
								1	300	2	420			1	540						
										1	300			2	360						
Teachers	Female	----	----	----	----	----	----	2	336	2	336	----	(*b*)	2	420	----	----	----	----	----	----
								1	324	2	240			2	276						
								1	240												

a Males elected to places provided for females.
b Data not available.
c One-fourth of the whole number.
d For the first six months services only.
e For only a part of each day.

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TABLE 26.—*Salaries of public-school teachers in Cincinnati, Ohio, 1860 to 1869, inclusive.*

Rank.	Sex.	1860.		1861.		1862.		1863.		1864.		1865.		1866. (a)		1867. (a)		1868. (a)		1869. (a)	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
Superintendent	Male	----	----	----	----	----	----	----	----	----	----	1	$2,000	1	$2,500	1	$2,500	1	(b)	1	$3,500
NORMAL SCHOOL.																					
Principal	Female	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	1,800
Assistant	Female	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	1,000
WOODWARD AND HUGHES HIGH SCHOOLS.																					
Principals	Male	1	$1,750	2	$1,500	1	$1,500	2	$1,750	2	$2,000	2	2,000	2	2,420	2	2,420	2	$2,600	2	2,600
		1	1,500																		
Assistants	Male	2	1,320	2	1,188	2	1,188	2	1,320	2	1,600	3	1,600	4	1,936	4	1,936		(b)	2	2,200
		2	1,200	2	1,080	2	1,080	2	1,200	1	1,500	1	1,080	1	1,800	1	1,800			2	2,050
		1	600	1	540	1	630	3	900	2	1,080	1	c540			1	1,500			1	2,000
		2	c600	2	c540	2	540	1	800							1	f448			1	1,900
		1	c400																	1	c500
First assistants	Female	2	1,000	2	900	2	900	2	1,000	2	1,000	3	850	1	1,028	2	1,928	----	(b)	1	1,500
		1	800	3	630	3	630	3	700	3	700	3	600	4	800	4	800			2	1,200
		2	700											1	700	1	750			4	1,000
														1	600	1	600			2	900
																				2	800
INTERMEDIATE SCHOOLS.																					
Principals	Male	4	1,320	3	1,152	3	1,152	2	1,320	2	1,600	2	1,000	2	1,900	1	2,000	1	2,100	1	2,100
																1	1,900	1	1,900	1	1,900
First assistants	Male	----	----	----	----	----	----	----	----	----	----	----	----	2	1,300	1	1,400	----	1,500	3	1,500
																1	1,200	----	1,400	1	1,400
																		----	1,300		
First assistants	Female	4	600	3	540	3	540	----	----	2	600	2	600	----	----	----	----	----	----	----	----
Assistants	Male	4	900	3	807	3	807	2	900	2	1,100	2	1,100	d1	800	----	----	d1	700	d1	800
		3	450	d2	406			d1	420												
		1	300	d1	364																
				d2	276																
Assistants	Female	2	450	3	406	3	406	2	e600	5	450	16	450	7	800	9	800	----	800	15	800
		3	400	4	364	7	381	3	450	7	420			2	750	5	750	----	750	3	750

a See schedule of salaries on page 691.
b Data not available.
c For only a part of each day.
d Men occupying places provided for women.
e Called first assistant previously and subsequently.

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TABLE 26.—*Salaries of public-school teachers in Cincinnati, Ohio, 1860 to 1869, inclusive*—Continued.

Rank.	Sex.	1860.		1861.		1862.		1863.		1864.		1865.		1866. (a)		1867. (a)		1868. (a)		1869. (a)	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
INTERMEDIATE SCHOOLS—cont'd.																					
Assistants	Female	1	$300	3	$276	2	$364	6	b$420	1	$400	----	----------	5	$700	5	$700	----	$700	7	$700
						2	276	1	400					3	650	1	650	----	650	1	650
								1	300					1	600	1	600	----	600		
DISTRICT SCHOOLS.																					
Principals	Male	14	1,200	15	1,068	15	1,068	----	1,200	16	1,500	16	$1,500	6	1,900	10	1,900	----	1,900	14	1,900
		2	1,000	2	894	2	894			2	1,300	2	1,300	5	1,800	5	1,800	----	1,800	2	1,800
														6	1,700	1	1,700	----	1,700	2	1,700
																2	1,600	----	1,600		
First assistants	Male	----	----------	----	----------	----	----------	----	----------	----	----------	----	----------	22	1,300	23	1,300	----	1,300	19	1,300
														5	1,200	4	1,200	----	1,200	2	1,200
														3	1,100	3	1,000	----	1,100	7	1,100
																		----	1,000	3	1,000
First assistants	Female	13	600	14	540	15	540	----	----------	14	600	12	600	----	----------	----	----------	----	----------	----	----------
										----	550	3	550								
Assistants	Male	b7	900	b8	807	b8	807	----	b900	26	1,000	26	1,000	c1	700	c3	700	----	c700	c7	700
		12	800	13	718	11	718	----	800	b1	800	b3	800	c1	500	c2	600	----	c600	c1	650
		1	600	1	540	1	600	----	600	c1	600	c2	500	c3	400	c2	550	----	c500	c5	600
		b2	552	b2	497	3	540	----	b552	b1	552	c2	360			c3	500			c1	500
		c5	420	c2	432	b3	497			c1	420	c1	240								
		c4	360	c1	381	c2	381			c5	360										
		c3	300	c2	329	c7	329			c2	300										
		c2	240	c5	276	c2	276														
				c1	240	c2	240														
Assistants	Female	19	420	23	381	26	381	----	d600	32	420	47	420	93	700	99	700	----	700	1	800
		81	360	79	329	95	329	----	420	106	360	70	360	14	650	20	650	----	650	132	700
		83	300	73	276	82	276	----	360	90	300	94	300	19	600	31	600	----	600	33	650
		15	e240	41	e240	32	e240	----	300	24	e240	55	f240	30	550	37	550	----	550	40	600
								----	e240					39	500	45	500	----	500	33	550
														58	450	48	450	----	450	42	500
														41	400	21	400	----	400	17	450
																				11	400
SPECIAL TEACHERS.																					
Music	Male	3	1,200	1	1,183	1	1,183	1	1,360	1	1,360	1	1,360	3	1,800	3	1,800	----	(g)	4	1,800
Drawing superintendent	Male	1	h960	3	1,068	3	1,068	3	1,200	3	1,200	3	1,200	1	h1,440	1	h1,440		(g)	1	h1,440
																				1	1,600

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Drawing	Female	..	..	.....	....	.....	....	.....	....	.....	....	.....	....	.....	2	850	2	850	....	(g)	4	800
Gymnastics	Male	....	....	.....	1	1,000	1	1,000	1	1,200	1	1,200	1	1,200	1	1,500	1	1,500	....	(g)	1	1,800
Gymnastics (assistant)	Female	..	....	.....	....	.....	....	.....	....	.....	1	600	1	600	1	800	1	800	....	(g)	....	.....
INDUSTRIAL SCHOOL.																							
Teachers	Female	1	360	1	329	1	329	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....
		1	300			1	240																

a See schedule of salaries on page 691.
b German assistants.
c Men occupying places provided for women.
d Called first assistants previously and subsequently.
e For the first six months of service only.
f After one year of service this may be increased to $300, at the option of the board.
g Data not available.
h For only a part of each day.

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TABLE 27.—*Salaries of public-school teachers in Cincinnati, Ohio, 1870 to 1879, inclusive.*

Rank.	Sex.	1870.		1871.		1872.		1873.		1874.		1875.		1876.		1877.		1878.		1879.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
Superintendent	Male	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$3,500
NORMAL SCHOOL.																					
Principal	Female	1	1,800	1	2,000	1	2,000	1	2,000	1	2,000	1	2,000	1	2,000						
Principal	Male															1	2,000	1	2,000	1	2,100
Assistant	Male			1	1,200	1	1,500	1	1,500			1	1,600	1	1,600	1	1,600	1	1,600	1	1,600
Assistants	Female	1	1,000	1	1,000	2	1,000	1	1,000			3	1,000	3	1,000	3	1,000	3	1,000	3	1,000
		1	800	1	800	2	900	1	900			1	800	1	800	1	900	1	800	1	900
		1	550			1	800	1	800												
WOODWARD AND HUGHES HIGH SCHOOLS.																					
Principals	Male	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600
Assistants	Male	2	2,200	2	2,200	2	2,200	2	2,200	----	(*a*)	2	2,200	1	2,200	1	2,200	1	2,200	1	2,200
		1	2,050	1	2,050	1	2,100	1	2,000			4	2,000	3	2,000	3	2,000	3	2,000	4	2,000
		1	2,000	2	2,000	1	2,000	4	1,900			1	1,900	1	1,900	2	1,900	1	1,900	1	1,900
		1	1,900	2	1,800	5	1,900	1	1,800			1	1,800	1	1,800	1	1,800	1	1,800	2	1,700
		1	1,800	1	1,600			1	1,200			1	1,200	1	1,700	1	1,600	2	1,600	1	1,400
		1	1,500	1	1,200									1	1,500	2	1,300	1	1,400	1	1,300
		1	*b*500											1	1,300	1	1,200	1	1,300		
														1	1,100						
Assistants	Female	1	1,800	1	1,800	1	1,800	1	1,500	----	(*a*)	1	1,500	1	1,500	1	1,300	1	1,300	1	1,300
		3	1,200	6	1,200	5	1,200	4	1,200			4	1,200	8	1,200	7	1,200	7	1,200	7	1,200
		5	1,000	1	1,000	1	1,000	4	1,000			4	1,100	2	1,100	2	1,100	2	1,100	1	1,100
		1	900	3	900	4	900	1	900			1	1,000			2	1,000	3	1,000	2	1,000
																				2	900
SPECIAL TEACHERS.																					
Music	Male	4	1,800	1	1,950	1	2,100	1	2,100	1	2,100	1	2,100	1	2,100	1	2,100	7	1,800	7	1,500
		1	*b*1,440	5	1,800	5	1,800	5	1,800	5	1,800	5	1,800	5	1,800	5	1,800				
												1	*b*1,200	1	*b*1,200	1	*b*1,200				
Drawing superintendent	Male	1	1,700	1	1,800	1	1,800	1	1,800	----	(*a*)	1	2,100	1	2,100	1	2,100			1	2,100
Drawing assistant	Male	1	800	1	1,000	1	1,100	1	1,100	----	(*a*)	1	1,500	1	1,500	1	1,500	1	1,500		
Drawing assistant	Female	4	800	5	800	2	800	1	800	----	(*a*)	1	800	2	800	3	800	3	800	1	1,500
						1	700	1	700			1	750	1	750					2	800
												1	700							1	750
Penmanship superintendent	Male	1	1,500	1	1,600	1	1,800	1	1,300	1	1,800	1	1,800	1	2,000	1	2,000	1	2,000	1	2,000
Penmanship assistant	Male	1	800	1	1,000	1	1,100	1	1,100	----	(*a*)	1	1,500	1	1,500	1	1,500	1	1,500	1	1,000
Penmanship assistant	Female			0	800	2	800	1	800	----	(*a*)	1	1,000	1	1,000	1	1,000	1	1,000	1	1,000
Gymnastics	Male	1	1,800	1	1,800	1	1,800														

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DEAF MUTE SCHOOL.																					
Principal	Male											1	1,000	1	1,100	1	1,200	1	1,200		1,200
Assistant	Male																	1	500		400
Assistant	Female																				300

a Data not available. b For a part of his time only.

Schedule of salaries of teachers in elementary schools in force during the above period. (a)

Rank.	Sex.	Salary 1st year.	Annual increase.	Maximum salary.
INTERMEDIATE SCHOOLS.				
Principals	Male	$1,800	$100	$2,100
First assistants	Male	1,200	100	1,500
Second assistants	Male	1,000	100	1,300
Assistants (b)	Male	700	100	900
Assistants	Female	600	50	800
DISTRICT SCHOOLS.				
Principals	Male	1,600	100	1,900
First assistants	Male	1,000	100	1,300
Assistants (b)	Male	500	100	700
Assistants (c)	Female	400	50	700

a This schedule was adopted in 1866.
b Men elected to positions provided for women.
c From 1870 to 1875, inclusive, one female assistant at $800 was assigned to each large school.

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TABLE 28.—*Salaries of public-school teachers in Cincinnati, Ohio, 1880 to 1891, inclusive.*

Rank.	Sex.	1880.		1881.		1882.		1883.		1884.		1885.		1886.		1887.		1888.		1889.		1890.		1891.	
		Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.	Number.	Annual salary.
Superintendent	Male	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$3,500	1	$4,500	1	$4,500	1	$4,500	1	$4,500	1	$4,500
NORMAL SCHOOL.																									
Principal	Male	1	2,200	1	2,200	1	2,200	1	2,200																
Principal	Female									1	1,800	1	1,900	1	1,900	1	2,000	1	2,000	1	2,000	1	2,000	1	2,000
Assistant	Male	1	1,600	1	1,600	1	1,600	1	1,600							1	500	1	540	...	(a)				
Assistants	Female	3	1,000	3	1,000	3	1,000	3	1,000	1	1,400	1	1,400	1	1,400	1	1,400	1	1,400	...	(a)	1	1,400	1	1,400
		1	500	1	500	1	500	1	500	1	1,000	1	1,000	2	1,000	2	1,000	2	1,000			2	1,000	2	1,000
										1	800	1	900	1	500							1	500	1	800
										1	500	1	500												
WOODWARD AND HUGHES HIGH SCHOOLS.																									
Principals	Male	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600	2	2,600
Assistants	Male	1	2,200	1	2,200	1	2,200	1	2,200	1	2,200	1	2,200	1	2,200	1	2,200	1	2,200	...	(a)	1	2,200	1	2,200
		5	2,000	1	2,100	1	2,100	1	2,100	1	2,100	1	2,100	1	2,100	1	2,100	1	2,100			1	2,100	1	2,100
		2	1,800	4	2,000	4	2,000	5	2,000	5	2,000	5	2,000	5	2,000	5	2,000	5	2,000			4	2,000	5	2,000
		1	1,500	1	1,800	1	1,900	1	1,500	2	1,600	1	1,700	1	1,800	1	1,900	1	1,700			1	1,900	1	1,800
		1	1,200	2	1,500	1	1,600	2	1,400	1	1,500	1	1,500	2	1,600	1	1,700	2	1,600			1	1,700	1	1,700
				1	1,200	1	1,500					1	1,400			1	1,600					3	1,600	1	1,600
						1	1,300																		
Assistants	Female	7	1,200	9	1,200	7	1,200	11	1,200	9	1,200	11	1,200	12	1,200	16	1,200	15	1,200	...	(a)	17	1,200	18	1,200
		1	1,100	6	1,000	4	1,100	1	1,100	4	1,100	1	1,100	5	1,100	1	1,000	1	1,100			1	1,100	3	1,100
		2	1,000	2	900	2	1,000	4	1,000	1	1,000	5	1,000			2	900	1	1,080			4	1,100	1	900
		5	900			4	900	1	900	3	900							1	1,000			1	800	1	800
																		1	900						
SPECIAL TEACHERS.																									
Music, superintendent	Male	1	1,900	1	1,900	1	1,900	1	1,900	1	1,900	1	2,100	1	2,100	1	2,100	1	2,100	1	2,100	1	2,100	1	2,100
Music, assistants	Male	6	1,600	6	1,600	6	1,600	6	1,600	6	1,600	7	1,600	7	1,600	7	1,600	6	1,600	6	1,600	6	1,600	6	1,600
						1	1,200	1	1,200	1	1,300	1	1,000	1	1,000	1	1,000	1	1,200	1	1,300	1	1,400	1	1,500
																		1	1,000					1	1,200
Music, assistant	Female																	1	800	1	900	1	1,000	1	1,100
Drawing, superintendent	Male	1	1,900	1	1,900	1	1,900	1	1,900																
Drawing, superintendent	Female									1	1,900	1	1,900	1	1,900	1	1,900	1	1,900	1	1,900	1	1,900	1	1,900
Drawing, first assistants	Female	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200
Drawing, assistants	Male							1	800	1	1,000	1	1,000	1	700	1	750	1	800	...	(a)	1	800	1	800
																								1	600

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Drawing, assistants	Female	3	800	3	800	3	800	2	800	2	800	2 1	800 700	1 1	800 750	1 2	800 600	1 2 1	800 650 550	---	(a)	1 2 1	800 700 600	1	800 700
Penmanship, superintendent	Male	1	1,900	1	1,900	1	1,900	1	1,900	1	1,900	1	1,900	1	1,900	---	-------	---	-------	---	-------	---	-------	---	-------
Penmanship, first assistant	Female	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	---	-------	---	-------	---	-------	---	-------	---	-------
Penmanship, teacher	Male	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	1	1,400	1	1,400	1	1,400	1	1,400
Penmanship, teacher	Female	---	-------	---	-------	---	-------	---	-------	---	-------	---	-------	---	-------	1	1,200	1	1,400	1	1,400	1	1,400	1	1,400
DEAF-MUTE SCHOOL (MANUAL).																									
Teachers	Male	1 1	1,200 500	1	900	1	1,000	1	1,100	1	1,200	1	1,200	1	1,200	1	1,200	1	1,200	---	(a)	---	-------	---	-------
Teachers	Female	---	-------	1	400	1	450	1	500	1	550	---	-------	1	700	1	700	1	700	1	700	1	700	1	800
ORAL DEAF-MUTE SCHOOL.																									
Teachers	Female	---	-------	---	-------	---	-------	---	-------	---	-------	---	-------	---	-------	---	-------	2	700	---	(a)	1 1	700 400	1 1	800 550

a Data not available.

Schedules of salaries of teachers in elementary schools in force during the above period.

Rank.	Sex.	1880–86, inclusive.			1887–91, inclusive.		
		Salary 1st year.	Annual increase.	Maximum salary.	Salary 1st year.	Annual increase.	Maximum salary.
INTERMEDIATE SCHOOLS.							
Principals	Male	$1,800	$100	$2,100	$1,800	$100	$2,100
First assistants	Male	1,200	100	1,500	1,200	100	1,500
Second asssistants	Male	1,000	100	1,300	1,000	100	1,300
Assistants (a)	Male	700	100	900	-------	-------	-------
Assistants	Female	600	50	800	600	50	800
DISTRICT SCHOOLS.							
Principals	Male	1,600	100	1,900	1,600	b 100	b 1,900
First assistants	Male	1,000	100	1,300	1,000	100	1,300
Assistants (a)	Male	500	100	700	-------	-------	-------
Assistants	Female	400	50	700	400	50	700

a Men elected to positions provided for women.
b Maximum salary of principals of district schools with less than 500 pupils, $1,600.

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CHAPTER III.

SCIENTIFIC TEMPERANCE INSTRUCTION IN THE PUBLIC SCHOOLS.

CONTENTS:

I.—Historical sketch, text-books, course of study, topical outline of study, standard of enforcement, duties of school boards, etc. (*pp. 695–709*).

II.—The effects of alcohol on the human system, and the method of teaching them, by Prof. A. C. Boyden (*pp. 709–713*).

III.—The legislation effected (*pp. 713–714*).

IV.—Reports of school officials on the enforcement of the law (*pp. 714–724*).

V.—Report of State Agent Geo. H. Martin upon results in Massachusetts (*pp. 724–733*).

VI.—Objections to scientific temperance instruction stated (*pp. 733–737*).

VII.—Answers to some false notions (*pp. 737–742*).

It is now about a decade since the first organized effort was made to cause all public-school pupils to be taught the laws of health and in that connection the evil effects of alcoholic beverages, tobacco and other narcotics; that their use in whatever degree is dangerous because of their power to create an uncontrollable appetite for more; that the indulgence of such an appetite is unqualifiedly detrimental to the physical and moral well-being of man; and that the only safe course to pursue with regard to these substances is one of total abstinence.

HISTORICAL SKETCH.

This movement was started by Mrs. Mary H. Hunt,[1] through the Woman's Christian Temperance Union. The previous experience of Mrs. Hunt as a professor or teacher of chemistry in an eastern college had led to her assuming practical oversight of the education of her only child, who was a student in the Massachusetts Institute of Technology from 1872 to 1876. "While thus engaged," she says, "the question concerning alcohol as a chemical reagent led to inquiry as to its origin, nature, and effects upon the human system as found in the popular alcoholic beverages. This study became an absorbing research that filled me with alarm for the future of a nation whose people were consuming such vast quantities of alcohol."

As a result of this study the conviction was forced upon her "that intemperance could never be prevented until people were taught the real nature and effects of alcoholic drinks, and that this must be done through the schools." The National Temperance Publication Society of New York made several tentative movements in that direction, principally under the direction of Miss Julia Coleman, whose Juvenile Temperance Manual, published in 1878, was subsequently introduced into a few public schools.

The town of Hyde Park, Mass., at the instigation of Mrs. Hunt, was the first to introduce the study of scientific temperance into its public school curriculum. No suitable text-book had been prepared, and for the time being use was made of The Temperance Lesson Book, written by Dr. B. W. Richardson (London, 1887).

Action of the Woman's Christian Temperance Union.—The first official action of the Woman's Christian Temperance Union was taken, in response to Mrs. Hunt's earnest importunity, at their Indianapolis meeting in 1879, when the following resolution was adopted:

Resolved, That this convention consider the introduction of scientific temperance text-books into the regular course of study in our public schools as a most hopeful line of work. We therefore urge the various States here represented to take immediate action to secure this important study taught in the schools of their several localities.

[1] It is proper to say that Mrs. Hunt kindly undertook the revision of the proofs of this historical sketch.

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A standing committee, of which Mrs. Hunt was made chairman, was chosen to carry the above resolution into action. But difficulties were soon encountered in the way of accomplishing any uniform work through a committee widely separated; and at the Boston meeting of the Woman's Christian Temperance Union the ensuing year (1880) a department of scientific temperance instruction in schools and colleges, under a national superintendent, was created, to take the place of the standing committee. Mrs. Hunt, who was chiefly instrumental in bringing about this change, was made superintendent of the department, a position she still holds. It was made her duty in that capacity "to originate, advise, and direct plans of work," which are carried out with the assistance of auxiliary superintendents in all the States and Territories, who are under the direction of and report to the national superintendent.

Subordinate assistants were appointed for the minor civil divisions of the State, so that the organization is somewhat military in character. Prompt, vigorous, and effective action has been thereby secured, with the ability to concentrate effort at any desired point. This centralization of authority has been one great secret of success.

The labors of the first year, 1880, were chiefly "confined to organizing the work throughout the country and to creating public interest in the proposed study through the press and lectures by the national superintendent before popular audiences, educational bodies, churches, and philanthropic conferences."

In her Brief History of the First Decade, from which the foregoing has been chiefly condensed, as also much which follows, Mrs. Hunt goes on to say: "Some teaching from Dr. Richardson's Temperance Lesson Book and a little work by Miss Coleman, entitled Alcohol and Hygiene, followed these efforts, by order of local school boards. The sporadic character of these results deepened the conviction that the study must be mandatory or it never would be systematically pursued. Experience soon proved the soundness of my position from the first, viz., that text-books on temperance *only* would not fully meet the need. In order to understand the consequences of violating hygienic law in all respects, but especially in the use of alcholic drinks and other narcotics, pupils must know something of relative physiology and general hygiene; therefore the study should be incorporated with these topics."

What the doctors said.—In the efforts of the leaders in the movement to make progress the stock objection that met them on every side was, "There is nothing definite that can be taught about the effects of alcoholic drinks upon the human system." "The doctors are not agreed about it." It became evident that no progress could be made in getting legislation until an authoritative reply to this objection could be produced.

Mrs. Hunt, therefore, went before the American Medical Association at its meeting at St. Paul, in June, 1882, and asked them for some expression as to the evil nature and effects of alcoholic drinks. She presented the following resolutions on behalf of the Woman's Christian Temperance Union:

Whereas alcoholic intemperance is a prolific cause of disease, and prevention, through the education of the people, is one of the most powerful antidotes,

Resolved, That we approve teaching the children and youth in the schools and educational institutions in this country, as facts of hygiene, the physiological dangers and evils resulting from the use of alcoholic beverages; and

Whereas it is the acknowledged duty of the State to provide for such education of the people as is essential to good citizenship,

Resolved, That we recommend the State legislature to enact laws requiring the physiological dangers and evils resulting from the use of alcoholic beverages taught in all schools supported by public money or under State control.

These resolutions were referred to the section on State medicine, which after some discussion adopted the following as a substitute:

Resolved, That the association reaffirm the resolutions in regard to the abuse of alcoholic liquors passed at Buffalo in 1878, and further urge that all State legislatures introduce hygiene as one of the branches to be taught in the schools.

The resolutions of 1878 so reaffirmed are as follows:

Resolved, That in view of the alarming prevalence and ill effects of intemperance, with which none are so familiar as members of the medical profession, and which have called forth from eminent practitioners the voice of warning to the people of Great Britain concerning the use of alcoholic beverages, we, the undersigned, members of the medical profession of the United States, unite in the declaration that we believe alcohol should be classed with other powerful drugs, that when prescribed it should be done with conscientious caution, and a sense of great responsibility.

Resolved, That we are of the opinion that the use of alcoholic liquors as a beverage is productive of a large amount of physical and mental disease; that it entails diseased appetites and enfeebled constitutions upon offspring, and that it is the cause of a large percentage of the crime and pauperism of our cities and country.

Resolved, That we would welcome any change in public sentiment that would confine the use of intoxicating liquor to the uses of science, art, and medicine.

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No one can doubt that these resolutions placed a powerful weapon in the hands of the promoters of the new study, or that it was most effectively used. "The favorite objection," wrote Mrs. Hunt at the time, "of opponents is silenced, for no one can hereafter say that the doctors of this country disprove the statement of facts against alcoholic beverages that we would teach the rising generation."

The end achieved.—A course of thorough and systematic agitation was entered upon to create a public sentiment in favor of compulsory temperance education and to influence law makers in the desired direction. As a result, the first compulsory temperance education law was enacted in Vermont, in November, 1882. By this law there was added to the branches to be taught in the common schools "elementary physiology and hygiene, which shall give special prominence to the effect of alcoholic drinks, stimulants, and narcotics, upon the human system."

In the ensuing year laws to the same effect, more or less stringent in their requirements, were enacted in many other States. A tabular statement giving the date of enactment of these laws and their general features will be found on page 713.

TEXT-BOOKS.

A difficulty was experienced at first in the matter of text-books. Dr. Richardson's Temperance Lesson Book proved too technical for common school use, and like Miss Coleman's book, contained only temperance matter, but no physiology or other hygiene which the State laws were demanding. Publishers and authors were slow to believe there would be a permanent market for this kind of literature.

The first physiological temperance book indorsed by the superintendent of the Scientific Department of the Woman's Christian Temperance Union was written by Dr. Steele, and published by A. S. Barnes & Co., the latter being actuated in their venture by philanthropic as well as business motives.

The design of the promoters of the movement was to have "all pupils in all schools," receive a temperance education, and to this end a series of at least three text-books would be necessary, one each for high, intermediate, and primary grades of schools, and four for schools closely graded. It was deemed best that these books should be issued by regular school-book publishing houses.

In 1884, after a search for authors and publishers, and the disappointments of authors of manuscripts rejected because unsuitable, and wrath of publishers books who sebould not be indorsed, two books were pronounced ready for use, one for high schools (Steele's Hygienic Philosophy) and one for intermediate grades (Hygiene for Young People). The book for primary grades was still wanting. Mrs. Hunt says in her report of that year:

"Large numbers of publishers and authors have rushed into our field with books containing the old and disproven theories concerning alcohol, badly arranged and badly graded, and otherwise inadequate to the demands of the laws and the needs of the schools. These works are defective in their treatment of alcohol, and have not the proportion or arrangement of temperance matter that is intended by the spirit and letter of this legislation."

The ensuing year (1885) the set of three approved text-books, known as the Pathfinder series, was made complete by the addition of the Child's Health Primer, prepared under the direction of the scientific department of the Woman's Christian Temperance Union.

As the temperance-education movement began to assume large proportions, publishers ceased to entertain doubts about a market for this kind of school literature. About thirty works on physiology for school use were issued by different houses immediately after the passage of the New York law in 1884. "Most of these were the old-time physiologies with a little temperance matter tacked on the back of the book as an addenda, where pupils would rarely reach it. The embarrassing position of the national superintendent in not being able to indorse these books can hardly be appreciated."

The laws passed by the Legislatures of Massachusetts and Pennsylvania in 1885 excluded text-books with temperance matter in the appendix. This aroused the opposition of the publishers, but to no purpose; they were obliged generally to remodel their books, "putting the temperance matter where it belongs, in each division of the subject of physiology with the other hygiene. Although this was the first step toward the satisfactory revision that came in later years, yet these books, in quality and quantity of temperance matter and adaptation to grade, were still so defective that they could not be indorsed," as was the Pathfinder series.

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Rigid text-book requirements in Vermont.—The Vermont law, as amended in 1886, required that "all pupils in all public schools of the State shall be taught the nature of alcoholic drinks and other narcotics. Children too young to read shall receive oral instruction, and those who can read shall use a text-book." Text-books were required to devote one-fourth their space to this subject, and schools not giving the statutory instruction forfeited their share of the public money.

Other States followed the example of Vermont in requiring one-fourth of the space of text-books in physiology to be devoted to temperance instruction.

The great petition to publishers.—In order to bring a strong pressure to bear upon publishers, a syllabus was compiled in 1887 of what should be taught in the schools as scientific temperance, and after having been signed by over two hundred leading American citizens, "representative of the best medical, physiological, chemical, educational, legal, and ethical opinion in our country," was presented to publishers in form of a petition asking for a revision of their imperfect text-books upon this subject. As a whole, this petition constituted "an expression of the best expert sentiment of our country, in favor of teaching to the children of the United States the full truth of science against strong drink and in favor of total abstinence."

After this petition was sent to the publishers its syllabus of requirements was adopted as their standard for temperance text-books by the National Woman's Christian Temperance Union, at Nashville, November, 1887, and became their creed, or "articles of faith," so to speak.

The full text of the petition is as follows:

A PETITION TO PUBLISHERS OF TEMPERANCE TEXT-BOOKS.

1. Thirty-two States and Territories now require scientific temperance instruction in the public schools, and the question whether the children shall receive such instruction is seen to depend largely upon the character of the text-books employed.

2. It was the intention of those who secured these laws that the children should have the latest science concerning the dangerous and hurtful qualities of alcohol used in any degree, and the peril of forming the habit of its use. The law requires this. Nothing less than this will ever satisfy its friends.

3. Those text-books that are largely physiology, with a minimum of temperance matter that only points out the evil of drunkenness and the danger of excessive use of alcoholic drinks and narcotics, do not meet the requirements of the law, and do not satisfy those who secured its enactment and who are determined to secure its enforcement.

4. Therefore, the undersigned legislators who voted for these laws in various States and in the National Congress, the representatives of temperance organizations, and who are familiar with the sentiment and are entitled to speak for the very numerous membership of different churches and other bodies, extending widely throughout the land, and citizens who speak for ourselves, do make respectful and earnest appeal to all publishers of text-books on this subject to revise their publications to conform to the latest results of scientific inquiry, and to meet the terms and spirit of these statutes in making the temperance matter the chief and not the subordinate topic in these books, so that public and authorized expressions of approval and indorsement of all such books can be issued and given wide circulation.

5. In urging this appeal we beg leave to represent that if this new education is to give to the world a coming generation of intelligent total abstainers, as we expect, its manuals of instruction must conform to the following specifications:

(1) They must teach with no uncertain sound the proven findings of science, viz:

(*a*) That alcohol is a dangerous and seductive poison.

(*b*) That beer, wine, and cider contain this same alcohol, thus making them dangerous drinks, to be avoided, and that they are the product of a fermentation that changes a food to a poison.

(*c*) That it is the nature of a little of any liquor containing alcohol to create an appetite for more, which is so apt to become uncontrollable that the strongest warning should be urged against taking that little and thus forming the appetite.

(2) They must teach also the effect of these upon "the human system," that is, upon the whole being—mental, moral, and physical. The appalling effects of drinking habits upon the citizenship of the nation, the degradation and crime resulting, demand that instruction here should give clear and emphatic utterance to the solemn warnings of science on this subject.

(3) This instruction must be as well graded to the capacities of each class of pupils as the modern school readers are. A book fit for high schools put into primary or intermediate classes will make the study a failure there. Truth is just as true and as scientific when told in easy words as when put into stilted technicalties the child can not understand.

(4) This is not a physiological but a temperance movement. In all grades below the high school this instruction should contain only physiology enough to make the hygiene of temperance and other laws of health intelligible. Temperance should be the chief and not the subordinate topic, and should occupy at least one-fourth the space in text-books for these grades. As only a small portion of the pupils in our public schools attend high schools, and vast numbers leave with the primary, this instruction should be early and ample. It is not desirable to have a separate book for the physiology heretofore studied in the high school or to limit the amount, but at least twenty pages out of that ordinarily required should be given to the question of the danger of alcoholic drinks and other narcotics, in a text-book for these classes.

(5) This effort to disabuse the minds of the rising generation of fallacies which lead to drink habits should purposely avoid reference to the medical use of alcohol, except to state that as by common consent its lay prescription is condemned, the question of its use as a remedy may properly be relegated to medical treatises, as out of place and misleading in a school text-book.

Lacking in any of these points, a text-book on scientific temperance is incomplete, and the use in the schools of such a book will not result in a strong temperance sentiment among the pupils using it.

Because the question of total abstinence for the children of this country, and therefore of their well-being and that of the land soon to be governed by them, depends so largely upon the teachings in these books, we make this appeal.

As a result of the foregoing petition nearly all of the publishers of temperance text-books expressed the desire to have their books remodeled in conformity therewith. This work of revision was taken up and carried on in 1888 under the supervision of Mrs. M. H. Hunt, the national superintendent of the scientific department of the Woman's Christian Temperance Union, with the assistance of the following advisory board: Albert H. Plumb, D. D., president Massachusetts Amendment Society; Daniel Dorchester, D. D., vice-president Massachusetts Total Abstinence Society; William E. Sheldon, president National Teachers' Association of 1887; Rev. Joseph Cook, of Boston Monday Lectureship.

Upon consultation with authors it soon became apparent that there was not so much difference of opinion about what was true concerning the subject as misapprehension as to what special truth should be brought forward. "Some writers were misled by supposing that exhortation or appeal after the style of the temperance lecture was desired. These difficulties vanished when they found that we wanted no fanatical preaching, but instead a full statement as to the origin, evil nature, and effects of alcoholic drinks and other narcotics, all told in language that the various grades of pupils can understand."

"The great men among these authors who are fully abreast with the researches, experiments, and proven facts of modern science on this subject were first to come into accord with the petition standard."

Now fully equipped.—Mrs. Hunt, writing at the beginning of 1892, says: "The study that was thus hampered and halting at the first is now fully equipped. What it then lacked is now supplied. Everything is ready. As the teachers translate these methods into actual school-room work, the intent of the law will be accomplished in the generation of intelligent total abstainers that will come from our schools."

Endorsed text-books (1892).

Primary text-books:

Health for Little Folks.
No. 1 of the Union Series.
Child's Health Primer.
House I Live In.
Published by the American Book Company, N. Y.
Good Health for Children.
Published by Leach, Shewell & Sanborn.
Physiology for Little Folks.
Published by Lee & Shepard, Boston, Mass.
A primer of Health.
Published by Silver, Burdette & Co., Boston.

Intermediate text-books:

Young People's Physiology, (or)
Hygiene for Young People.
No. 2 of the Union Series.
Youth's Temperance Manual.
Published by the American Book Company, New York.
Stowell's Healthy Body.
Published by Silver, Burdette & Co., Boston.
Blaisedell's Pysiology for Boys and Girls.
Published by Lee & Shepard, Boston, Mass.
Brand's Health Lessons for Beginners.
Published by Leach, Shewell & Sanborn.

Advanced grammar grade text-books:

No. 3 of the Union Series.
Johonnot & Bouton's Lessons in Hygiene.
Published by the American Book Company, New York.
Essentials of Health.
Published by Silver, Burdette & Co., Boston.
Young Folks' Physiology.
Published by Lee & Shepard, Boston.

High school text-books:

Tracy's Outlines of Anatomy, Physiology, and Hygiene.
Steele's Hygienic Physiology.
Eclectic Guide to Health.
Published by the American Book Company, New York.
Martin's Human Body and the Effects of Narcotics.
Published by Henry Holt & Co., New York.

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Charts.—With reference to charts Mrs. Hunt says: "To be worth anything to the cause the endorsement of this department on scientific matter must represent accuracy. Realizing the injury to the work sure to follow any accusation of inaccuracy that could be well sustained, we have hesitated about placing our endorsement upon physiological charts. We are yet waiting for the chart that shall be pronounced accurate, as to delineation and coloring, by the best physiological experts, and that shall give a due representation of the evil results of narcotic indulgence. We would advise our friends to delay the purchase of charts until some that are authorized are issued."

Course of study.—In order to assist in finding a place for this study, and to determine how much to teach each year and in what grades to teach it orally, "a carefully graded course of study in this branch has been prepared covering all these points." "It also shows the grades or classes in both graded and ungraded schools to which the various books are adapted." This course of study is as follows:

NATIONAL AND INTERNATIONAL DEPARTMENT OF SCIENTIFIC INSTRUCTION OF THE WOMAN'S CHRISTIAN TEMPERANCE UNION.

A SCHEDULE OF COURSES OF STUDY IN PHYSIOLOGY AND HYGIENE, WITH SPECIAL REFERENCE TO THE NATURE AND EFFECTS OF ALCOHOLIC DRINKS AND OTHER NARCOTICS.

This plan provides for three lessons per week for fourteen weeks of each school year, after which the subject may be dropped for the remainder of the year, to be taken up with a more advanced treatment for the same length of time the following year. These courses, with well-graded text-books that contain the truths the law requires taught, will, if faithfully pursued, with oral or written reviews, cover the subject, and will not unduly crowd other studies.

GRADED SCHOOLS.

COURSE A.[1]—*For graded schools having eight years below the high school.*

[Pathfinder series of text-books.]

First, second, and third year.—"Child's Health Primer," in hands of teacher for oral instruction. Lessons three times per week. Facts drawn from text-book.

Fourth year.—"Child's Health Primer," in hands of pupils. Recitations three times per week until the book is completed.

Fifth year.—"Hygiene for Young People," in hands of pupils. Recitations three times per week until first half of book is completed.

Sixth year.—"Hygiene for Young People," in hands of pupils. Recitations three times per week until last half of book is completed, reviewing from beginning.

Seventh year.—"Lessons in Hygiene, No. 2 of Appleton series," in hands of pupils. Recitations three times per week until first half of book is completed.

Eighth year.—"Lessons in Hygiene, No. 2 of Appleton series," in hands of pupils. Recitations three times per week until last half of book is completed, reviewing from first chapter.

High-school year.—"Steele's Hygienic Physiology," in hands of pupils until book is completed.

COURSE B.[2]—*For graded schools having eight years below the high school.*

[Appleton series of text-books.]

First, second, and third year.—"Health for Little Folks," in hands of teacher for oral instruction. Lessons three times per week. Facts drawn from text-book.

Fourth year.—"Health for Little Folks," in hands of pupils. Recitations three times per week until book is completed.

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[1] In schools having seven years below the high school, more time per year should be given to the study, so as to complete Lessons in Hygiene during the seventh year. If there are only six years below the high school, enough time should be given to complete "Hygiene for Young People" during the fifth year, as well as Lessons in Hygiene during the sixth year.

[2] Schools having seven years below the high school can complete "Lessons in Hygiene" during the seventh year. Those having six years below the high school can, in addition, complete "Young People's Physiology" during the sixth year.

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Fifth year.—"Young People's Physiology," in hands of pupils. Recitations three times per week until first half of book is completed.

Sixth year.—"Young People's Physiology," in hands of pupils. Recitations three times per week until last half of book is completed, reviewing from first chapter.

Seventh year.—"Lessons in Hygiene," in hands of pupils. Recitations three times per week until first half of book is completed.

Eighth year.—"Lessons in Hygiene," in hands of pupils. Recitations three times per week until last half of book is completed.

High-school year.—"Outlines of Anatomy, Physiology, and Hygiene," by Roger S. Tracy, M. D., in hands of pupils until book is completed.

COURSE C.[1]—*For graded schools having seven years below the high school.*

[Union series of text-books.]

First, second, and third year.—"Number One" of the Union series, in hands of teacher for oral instruction. Lessons three times per week. Facts drawn from text-book.

Fourth year.—"Number One" of the Union series, in hands of pupils. Recitations three times per week until book is completed.

Fifth year.—"Number Two" of the Union series, in hands of pupils. Recitations three times per week until book is completed.

Sixth year.—"Number Three" of the Union series, in hands of pupils. Recitations three times per week until first half of book is completed.

Seventh year.—"Number Three" of the Union series, in hands of pupils. Three recitations per week until last half of book is completed, reviewing from first chapter.

High-school year.—Steele's "Hygienic Physiology," or "Outlines of Anatomy, Physiology, and Hygiene," by Roger S. Tracy, M. D., or "The Human Body and the Effects of Narcotics," by H. Newell Martin, M. D. In hands of pupils until book is completed.

COURSE D.—*For graded schools having six years below the high school.*

[Eclectic series of text-books.]

First, second, and third year.—"House I Live In," in hands of teacher for oral instruction. Recitations three times per week. Facts drawn from text-book.

Fourth year.—"House I Live In," in hands of pupils. Recitations three times per week until book is completed.

Fifth year.—"Youth's Temperance Manual," in hands of pupils. Recitations three times per week until first half of book is completed.

Sixth year.—"Youth's Temperance Manual," in hands of pupils. Recitations three times per week until last half of book is completed.

High-school year.—"Eclectic Guide to Health," in hands of pupils until book is completed.

COURSE E.—*For graded schools having eight years below the high school.*

[Blaisdell Revised Physiology series.]

First, second, and third year.—"Physiology for Little Folks," in hands of teacher for oral instruction. Lessons three times per week. Facts drawn from text-book.

Fourth year.—"Physiology for Little Folks," in hands of pupils. Recitations three times per week until book is completed.

Fifth year.—"Physiology for Boys and Girls," in hands of pupils. Recitations three times per week until first half of book is completed.

Sixth year.—"Physiology for Boys and Girls," in hands of pupils. Recitations three times per week until last half of book is completed, reviewing from first chapter.

Seventh year.—"Young Folks' Physiology," in hands of pupils. Recitations three times per week until first half of book is completed,

[1]Schools having six years below the high school can complete "Number Three" of the Union series during the sixth year.

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Eighth year.—"Young Folks' Physiology," in hands of pupils. Recitations three times per week until last half of book is completed, reviewing from first chapter.

High-school year.—Steele's "Hygenic Physiology," or Tracy's "Outlines of Anatomy, Physiology, and Hygiene," or Martin's "Human Body and the Effects of Narcotics," in hands of pupils until book is completed.

UNGRADED SCHOOLS.

In an ungraded school, three classes should be formed, one for advanced pupils, one for those who rank as intermediate, and another for primary. All pupils in the school should be divided according to their attainments among these three classes.

Is it necessary to have a separate book for each of the three classes referred to in an ungraded school? Yes, emphatically yes. All pupils in ungraded schools where there are advanced pupils can not be taught as the law requires with less than three grades of books. The primary or lower grade pupils need a book they can understand; the next grade should have one a little more advanced; and pupils who correspond to the high-school grade should have a book adapted to their acquirements. This study has often been made a ridiculous failure by the attempt in ungraded schools to make one book (and that often a high-school book) fit all pupils.

COURSE A.—*For ungraded schools, or schools having two, three or four departments.*

[Pathfinder series of text-books.]

Primary class.—Pupils reading in the primer, first, second, and third readers. "Child's Health Primer," in hands of teacher for oral instruction. Lessons three times per week. Facts drawn from text-book.

Intermediate class.—Pupils reading in Fourth Reader. "Hygiene for Young People," in hands of pupils. Recitations three times per week until book is completed.

Advanced class.—Pupils reading in Fifth Reader and higher books. "Physiology and Health, No. 3 of Union series," in hands of pupils. Recitations three times per week until book is completed.

COURSE B.—*For ungraded schools, or schools having two, three, or four departments.*

[Appleton series of text-books.]

Primary class.—Pupils reading in the primer, first, second, and third readers. "Health for Little Folks," in hands of teacher for oral instruction. Lessons three times per week. Facts drawn from text-book.

Intermediate class.—Pupils reading in Fourth Reader. "Young People's Physiology," in hands of pupils. Recitations three times per week until book is completed, reviewing from first chapter.

Advanced class.—Pupils reading in Fifth Reader and higher books. "Lessons in Hygiene," in hands of pupils. Recitations three times per week until book is completed.

COURSE C.—*For ungraded schools, or schools having two, three, or four departments.*

[Union series of text-books.]

Primary class.—Pupils reading in the primer, first, second, and third readers. "Number One" of the Union series, in hands of teacher for oral instruction. Lessons three times per week. Facts drawn from text-book.

Intermediate class.—Pupils reading in fourth reader. "Number Two" of the Union series in hands of pupils. Recitations three times per week until book is completed.

Advanced class.—Pupils reading in fifth reader and higher books.[1] "Number Three" of the Union series, in hands of pupils. Recitations three times per week until book is completed.

[1] Where there are pupils of high-school grade in ungraded schools, they should have a high-school text-book, either Steele's "Hygienic Physiology," or "Outlines of Anatomy, Physiology and Hygiene," by Roger S. Tracy, M. D., or "The Human Body and the Effects of Narcotics," by H. Newell Martin, M. D.

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COURSE D.—*For ungraded schools, or schools having two, three, or four departments.*

[Eclectic series of text-books.]

Primary class.—Pupils reading in the primer, first, second, and third readers. "House I Live In," in hands of teacher for oral instruction. Lessons three times per week. Facts drawn from text-book.

Intermediate class.—Pupils reading in fourth reader. "Youth's Temperance Manual," in hands of pupils. Recitations three times per week until book is completed.

Advanced class.—Pupils reading in fifth reader and higher books.[1] "Eclectic Guide to Health," in hands of pupils until book is completed.

COURSE E.—*For ungraded schools, or schools having two, three, or four departments.*

[The Blaisdell revised series of text-books.]

Primary class.—Pupils reading in the primer, first, second, and third readers. "Physiology for Little Folks," in hands of teacher for oral instruction. Lessons three times per week. Facts drawn from text-books.

Intermediate class.—Pupils reading in fourth reader. "Physiology for Boys and Girls," in hands of pupils. Recitations three times per week until book is completed.

Advanced class.—Pupils reading in fifth reader and higher books. "Young Folks' Physiology," in hands of pupils. Recitations three times per week until book is completed.

REASONS FOR THE ADOPTION OF A COURSE OF STUDY AS OUTLINED.

The reasons to be urged in favor of adopting a definite course of study in this topic, which includes text-books in the hands of all pupils above the primary, are as follows:

First. Such a course gives the definite time and place to the branch that the law demands.

Second. It points out the grade for which oral instruction is adapted, and those in which instruction should be given from text-books in the hands of pupils.

Third. It specifies the grade for which each book is adapted. The pupil just learning to gain information from a text-book needs one in which the style and vocabulary is very little in advance of his own. As soon as he gains ability to master a more advanced style and treatment he needs a more advanced book. To keep him longer in the book he has outgrown is to stultify his developing faculties. On the other hand, to give him a book too advanced is to discourage him and lead to a distaste for study. Either course is false economy and contrary to all educational principles.

Fourth. The use of text-books as specified secures the teaching of truth instead of the notions and traditions of some teacher who has had no special education on this topic.

Fifth. It will, in nearly all cases, prevent outside topics, such as the legal or political phases of the temperance question, from being brought into the recitation under the guise of scientific temperance instruction, which sometimes gives rise to trouble.

Sixth. It takes less time from the overcrowded school course than anything like an honest attempt above the primary class to teach the subject orally, which is always liable to cause waste of time through branching out into unimportant collaterals.

TOPICAL OUTLINE OF COURSE OF STUDY.[1]

[*Prepared by Department of Scientific Temperance Instruction, W. C. T. U.*]

This age needs men and women who are wise to resolve, strong and quick to act. Such men and women are the result of the right development of the threefold human system, mental, moral, and physical, and are the object sought by this study.

[1] This topical outline has been furnished by Mrs. Hunt in advance of publication.

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Because the use of alcoholic drinks and other narcotics is a prime obstacle in the way of such development, a knowledge of their origin, their inherent evil nature, and of their destructive effects is an objective point in the study of scientific or physiological temperance. But it is by no means all. This study does not stop with teaching the consequences of evil. It at the same time shows the road to the ideal.

As demanded by law and presented in all approved manuals of instruction, it teaches the all-round physical education that leads to strength, health, and such physical development as will make the body an efficient servant of a rightly trained mind—a meet temple for the divine indwelling. In showing the consequences of broken natural law, it is also a powerful moral teacher.

As some knowledge of structure is an essential basis, enough anatomy and physiology to make the various laws of hygiene intelligible is a part of the study. The whole subject may be classified under the following divisions:

Ten divisions.

(There may be differences of opinion as to the order of presenting these divisions. It is not essential that the same order be always followed, provided the division treating of the nature of alcoholic drinks and other narcotics precede those treating of the various organs and the effects of these narcotics upon them.)

1. *Food.*—This division includes the uses of and kinds of food and rules for their selection and proper preparation, together with hygienic rules in regard to eating.

(For reference and personal study the teacher should have some one of the high-school books mentioned on the last page of this circular, and for guidance in the selection of matter appropriate for primary grades, one or more of the primary books there mentioned.)

2. *Alcoholic drinks and other narcotics.*—This division has for its object to show when and why healthful fruit juices and grain infusions become poisonous drinks that should be avoided. The instruction therefore covers the changes that take place in these liquids during fermentation, the causes of such changes, and the nature of the changed liquids.

(For full information on these points the teacher should study this division of the subject in some one or more of the text-books mentioned above, and for the selection of matter adapted to grade, the primary text-books before mentioned.)

3. *Digestion.*—Its anatomy, physiology, and hygiene, and the effects of alcoholic drinks and other narcotics.

4. *Circulation.*—Its anatomy, physiology, and hygiene, and the effects of alcoholic drinks and other narcotics. In this division the controlling action of the vaso-motor and inhibitory nerves should be brought out as early as possible, because many of the contradictory appearances concerning the action of alcoholic and other narcotics on various portions of the body are only intelligible when this is understood.

5. *Respiration.*—Its anatomy, physiology, and hygiene, including the effects of alcoholic drinks and other narcotics, with special emphasis on the importance of breathing pure air, of full and deep breathing, and of right positions for securing this; also of simple methods of ventilating rooms in which no provision for ventilation has been made. Such information, put into actual practice in the schoolroom, will be carried home by the children and correct many of the bad habits in this direction that lead to unhealthful conditions of the body and to drink.

6. *The nervous system.*—Its anatomy, physiology, and hygienic laws that govern the best development of nerve and brain tissue, and the consequences of disobeying these laws in the use of alcoholic drinks and other narcotics. The shock of all narcotic indulgence falls with greatest force on the nervous system. Instruction at this point should therefore be full and emphatic. Effects on the intellect, will, and moral character, as a result of its effects on brain and nerve tissue, should be fully brought out, as is done in all the approved text-books, which also indicate how much of each topic may be appropriately presented in each grade.

7. *The bones.*—The anatomy and physiology of bone tissue and its hygiene, including the effects of alcoholic drinks and other narcotics. Special stress should be laid on the fact that growth lost through wrong habits during the growing time of life can never afterwards be made up, of the importance of right position, and the relation of proper food, and the effects of alcohol, tobacco, and other narcotics in preventing healthful growth.

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8. *The muscles.*—The anatomy and physiology of muscular tissue and its hygiene, including the effects of alcoholic drinks and other narcotics. This division of the subject includes in its hygiene systematic exercises for the development of the various tissues of the body, such as calisthenics, gymnastics, or what are called physical-culture exercises.

9. *The skin.*—Its anatomy, physiology, and hygiene, including the relation of exercise, pure air, right food, bathing, and proper clothing to the hygiene of the skin, and the evil effects of alcoholic drinks and other narcotics upon the same.

10. *The senses.*—Their anatomy, physiology, and hygiene, including the effects of alcoholic drinks and other narcotics.

Gradation.

In physiological temperance, as in other branches which extend through several years of the school life, a few of the simple elements should be taught in the lowest grade, and these reviewed and more added from year to year, until an advanced treatment of the whole topic is completed in the high school.

In the lower primary grades a few lessons on the parts of the body should precede the work on the other divisions, which, in the lower grades, should consist chiefly of hygiene with only a very little physiology and almost nothing of the anatomy of internal organs.

Methods for primary grades.

Simple truths should be selected for first, second, and third year pupils under each division of the subject, to be developed by means of simple stories, objects, or pictures, or questions relating to the pupil's previous experience. The following indicates what may be taught under the division of alcoholic drinks and other narcotics to *first-year pupils*, to be reviewed with added truths for second or third year pupils:

First lesson:

1. There are ferments on the dust on grapes.
2. There is sweet juice inside the grape.
3. When the juice is pressed out the ferments get into it.
4. The ferments take away the sweetness of the juice and leave a poison in it

Second lesson:

1. Poisons can do us harm.
2. Poisons may kill.
3. Alcohol is a poison.
4. We should never take any drink that has alcohol in it.

Third lesson:

1. Cider is made from apples.
2. Ferments change the juice of the apples after it is pressed out.
3. We should not drink cider, for there is alcohol in it.
4. Wine is made from grapes.
5. We should not drink wine, for there is alcohol in it.
6. There is no alcohol in grapes or apples.

Methods for lower intermediate grades.

The law, in saying that this study should be introduced and taught as a regular branch, virtually says that the established methods of teaching other branches with text-books when pupils are able to read, and orally before, is to be the method here. But the books used should be adapted to grade. Where such books are in the hands of the pupils three lessons per week for fourteen weeks of the school year will allow time for covering as much of each division of the subject as the pupils are capable of understanding, without repetition or crowding other branches. When pupils have mastered so much of a topic as is adapted to their grades, they should not go over and over the same with needless repetition. The subject, after suitable reviewing, should be dropped for the remainder of the year and something else take its place.

Fourth-year pupils.—Pupils in the fourth year of school are ready to begin to learn to use text-books, and should at this point begin to pursue this branch as a regular text-book study. The matter contained in the indorsed primary text-

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book has been carefully culled with special reference to what is adapted to this grade of pupils.

Fifth and six year pupils.—Pupils in these grades are prepared for a larger discussion of the subject, which should here, as in all grades above the primary, be a text-book study. More time would therefore be required to cover the subject, which may here be distributed over a period of two years. Fifth-year pupils may take a part of the ten divisions, as food, alcoholic drinks, and other narcotics, digestion, circulation, respiration. [The hygiene of the last three will include the effects of alcoholic drinks and other narcotics.]

Sixth-year pupils, after reviewing the work of the fifth year, may take the remaining divisions, as bones, muscles, skin, the nervous system, the senses [each including in its hygiene the effects of alcoholic drinks and other narcotics].

For the use of pupils in these grades a large variety of books that contain the matter that should be taught at this stage, expressed in language adapted to the comprehension of the pupils, without the use of technical terms, are ready and indorsed by the friends of the movement.

Advanced grammar grades.

For *seventh and eighth year pupils* the topics may be apportioned as in the fifth and six year grades; but the pupils will require text-books containing a more advanced treatment of the subject. Nothing is more detrimental to the object sought by this study than attempting to make one grade of books on temperance physiology fit all grades of pupils.

High-school grades.

The spirit and letter of the law requires this to be a text-book study in this grade. High-school pupils are capable of comprehending the partially technical treatment found in the indorsed high-school physiologies mentioned on p. 699. This can be easily mastered the first year of the high-school course. Where examinations show that it has been so mastered the study is completed and should be dropped and not repeated through the other years. Pupils in the second and third years of the high school who have not had this study should take it up in those grades.

Ungraded schools.

The divisions are the same here as in the graded schools. The pupils should be arranged in classes according to their attainments, ordinarily three—a primary, an intermediate, and a more advanced. Each class of pupils able to read should have books corresponding to their various grades. At least three grades of books on this subject are generally needed for ungraded schools.

THE SPECIAL WORK OF 1890.

"The special work of 1890 has been careful planning for thorough enforcement of legislation that has made scientific temperance a mandatory study. Two States, Massachusetts and Pennsylvania, began this year what may be termed campaigns for this enforcement. The State organizations, after voting to make this a leading line of work, provided funds for paying the expenses of county superintendents or other organizers to go through the counties securing local workers; also for the necessary literature and postage. Literature, showing the local superintendents, as fast as they were appointed, exactly what to do in every detail of the work, was then sent out from State and national headquarters."

"As soon as active work for enforcement was begun it became apparent that an accepted standard as to what constitutes an honest enforcement of a temperance education law is as necessary as the standard for temperance text-books proved. Time and experience have established something like school-room standards for the pursuit of other branches; but the conceptions as to how this new subject should be studied and taught were vague, various, and indefinite. From consultation with eminent educators and comparison of the fruits of varied experience the following standard was wrought out. This is being sent to superintendents of public instruction intrusted with the enforcement of temperance education laws in various States. Its specifications as to minimum of time, necessary means, and method for the pursuit of the study is receiving their cordial indorsement:"

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A STANDARD FOR THE ENFORCEMENT OF A TEMPERANCE EDUCATION LAW

1. *Minimum of time.*[1]—The pursuit of the study of physiological temperance by "all pupils in all schools," as the law demands, requires at least three lessons per week for fourteen weeks of each school year below the second year of the high school. After an adequate and well-graded portion of the topic assigned for this time is thoroughly learned, the subject may then be dropped for the remainder of that year. The following year a little more advanced treatment of the subject should be pursued for the same length of time. Allowing twenty minutes to a lesson for all grades or classes above the primary, this requirement would amount to only fourteen hours per year; but if carried through the several years between the primary and the second year of the high school or corresponding class of ungraded schools, would give sufficient time for a thorough comprehension of the subject without encroaching upon other studies.

2. *Necessary means for the fulfillment of the law.*—Well-graded text-books on physiology and hygiene that contain also the "special" facts concerning the nature and effects of alcoholic drinks, tobacco, and other narcotics, that the law requires taught. These facts can not be treated in less than one-quarter of the space given to the physiology and hygiene appropriate for primary and intermediate grades, or in less than twenty pages of the ordinary high-school book. These books should be as well graded to the capacities of pupils as modern school readers are.

3. *Necessary method.*[2]—Text-books in the hands of pupils who use text-books in studying such other branches as arithmetic or geography, and oral instruction, not less than three times per week, for those not sufficiently advanced to use text-books.

4. *Examinations or tests.*[3]—As thorough examinations or tests should be required in this study as in other branches, the same marking system should be used, and such marks should enter into the general average which decides the rank of the pupil.

The above standard of requirement for the enforcement of a temperance education law is both fair and just. Anything less would not represent the spirit and letter of this legislation, and would not be a pursuit of the subject "as a regular branch" by "all pupils in all schools," as the laws of many States demand.

(Signed)

HENRY SABIN,
Superintendent Public Instruction for Iowa.

A. A. MINER,
Member of State Board of Education of Massachusetts.

ALICE FREEMAN PALMER,
Member of State Board of Education of Massachusetts.

ELMER H. CAPEN,
Member of State Board of Education of Massachusetts.

J. ESTABROOK.
Superintendent of Public Instruction, Michigan.

N. A. LUCE,
Superintendent of Common Schools of Maine.

GEO. J. LUCKEY,
Superintendent of Pittsburg Schools, Pennsylvania.

W. H. JACK,
State Superintendent of Public Education for Louisiana.

D. J. WALLER, Jr.,
Superintendent Public Instruction for Pennsylvania.

THOS. M. BALLIET,
Superintendent Schools, Springfield, Massachusetts.

RICHARD EDWARDS,
Superintendent Public Instruction for Illinois.

W. B. POWELL,
Superintendent Schools for Washington, D. C., and District of Columbia.

IRA G. HOITT,
Superintendent Public Instruction for California.

A. N. RAUB,
President State Board of Education, Delaware.

BENJ. S. MORGAN,
State Superintendent Free Schools, West Virginia.

GEO. W. WINANS,
Superintendent Public Instruction for Kansas.

JOHN HANCOCK,
State Commissioner of Common Schools for Ohio.

JOHN OGDEN,
Superintendent Public Instruction for North Dakota.

W. C. DOVEY,
Superintendent of Public Instruction for Nevada.

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[1] Three lessons per week for fourteen weeks is specified, instead of one lesson per week for forty weeks, or two lessons per week for twenty-one weeks, because when the lessons come farther apart the pupils forget the last before they reach the next; the subject as a whole does not become so readily a part of the intelligence; more time has to be taken in reviewing the last lesson before taking up the new; the pupil's interest is not so well sustained, nor proficiency so easily acquired, as when the lessons are given in closer succession.

[2] Without well-authenticated text-books in the hands of pupils, error is as liable to be taught as truth, for teachers have rarely received even a brief course of instruction in the subject, and their knowleege of the same is therefore made up of as much folklore as fact. Much time is also liable tc be wasted over matters that are entirely irrelevant, such as the legal or political phases of the temperance question, whenever the text-book is not followed.

[3] Teachers will be more thorough in teaching a subject in which the pupils, and hence their faithfulness in teaching it, are put to a test. The pupils will also study a subject more faithfully when they know that their standing or promotion depends upon their ability to pass an examination in it.

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The following, relating to the requirements of institute instructors and the duties of school boards, is taken from Mrs. Hunt's work, "A Brief History of the First Decade," before referred to:

INSTITUTE INSTRUCTORS.

There is now great need of trained institute instructors on this topic. Great harm has been done this cause, and the study has been brought into disrepute, by persons going before institutes and attempting to give instruction when they were not qualified to do so, and were not prepared to answer the questions propounded by critics, friendly or otherwise.

An institute instructor on this topic should have the following qualifications:

1. He, or she, should be a good physiologist.

2. Should be thoroughly familiar with the biological side of the question as revealed by the researches of the last few years. Should be well read in the works of Pasteur, De Barry, Troussart, Shurtzenberger and others on fermentation.

3. Should know enough of modern investigation to be able to refute, on the testimony of scientific experts, the popular fallacies concerning the nature of alcohol, especially as found in the most common drinks, beer, wine, cider, etc.

4. Should be familiar with the great physiological authorities on the subject of the effect of these narcotics upon the human system, mental, moral, and physical.

5. Should be familiar with all the school literature on this subject and be able to point out quickly where one book is defective and where and why another is sound.

6. Should understand thoroughly the matter of grading the topic, *i. e.*, what should be taught the first year and what enlargement of the subject should be added each succeeding year, through all the grades, in order that "all the pupils in all schools" may be taught the subject as the law demands without unnecessary repetition.

7. Should be familiar with modern methods of teaching as based upon psychological principles, so as to be able to present this subject in harmony with the same.

8. Should have also what is called "platform powers," *i. e.*, ability to present this subject with clearness, enthusiasm, and the magnetism which holds an audience.

The subject of physiology and hygiene, with special reference to the nature and effects of alcoholic drinks and other narcotics, is a large one requiring exact knowledge on the part of anyone who would attempt to instruct teachers. For those who can fully meet these requirements there is a wide opening, and correspondence with such is invited by the national superintendent of this department, Mrs. Mary H. Hunt, Hyde Park, Mass.

A bureau for the training of such instructors on this topic for teachers' institutes is already under way. Applicants for the course of training will be required to present testimonials as to previous education, capacity for study, aptness to teach, and power to interest an audience. The instructors now preparing for this work have had experience as institute instructors on other topics, and have established a reputation in that direction.

THE SCHOOL BOARD.

The parties who ought to take the first official steps in the enforcement of a temperance education law are ordinarily the local school boards. These steps, if rightly taken, are:

(1) The adoption of a definite course of study, with time and place given to it as to other branches, and for each grade of pupils.

(2) The recommendation of text-books containing the facts the law requires taught, graded to the capacities of the several classes of scholars.

In the discharge of these duties on the part of the school boards, there is wide room for improvement. They have too often recommended books notably lacking in temperance matter, and so absolutely out of grade as to be practically useless. Conscientious teachers in such cases have tried to give oral instruction, but they have not had the previous drill in this branch that they have had in others. When neither the teacher nor the books are in possession of the facts to be taught, it is not strange that the teacher soon runs out of matter for the so-called oral instruction.

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Oral instruction on this topic, in all grades above primary, has been, and still is, a signal failure. We must insist upon text-book study in all grades using text-books for other like branches, if we would not be mocked with disappointment in results.

A master in a city school, under temperance education law, recently said: "I can and will teach this branch when it is put into my course of study and books containing the subject are put into my hands and those of my pupils, but the school board must do that first. If they fill my course of study absolutely full with other branches, leaving no time for this, and in addition, neglect to give me or my pupils any adequate text-books, I can not do much."

This statement represents the relation of school boards to the enforcement of these laws, and reveals the greatest hindrance to be overcome. The neglect with these officials is often due to misapprehension or indifference, and sometimes to positive opposition. The appeal in the latter case is to the people for the election of persons who will execute the law. The man who would withhold this instruction from the children of a city or modify its full truth for fear of injuring the brewing or other liquor interests is most unfit to be intrusted with any care of the education of the children in this age. Misapprehension on the part of school boards can be enlightened; that should be the work of the local superintendent. The indifferent can ordinarily be aroused; if not, they should be retired.

Hard indeed must be the heart of the man or woman who could deliberately withhold the utmost warning science has against strong drink and other narcotics from the children under his or her care. If we deliberately or otherwise withhold a given information from a child are we not responsible for what may follow to that child's future and to others through him because of such withholding? Is it too much to say that the officials who carelessly, negligently, or purposely fail to provide for the full enforcement of the temperance education laws in the schools under their control, are incurring a fearful and personal responsibility for the drunkenness of the future? The time has come for calling attention to this from pulpit, platform, and press.

II.—THE EFFECTS OF ALCOHOL ON THE HUMAN SYSTEM AND THE METHOD OF TEACHING THEM.

By Prof. A. C. Boyden, of Bridgewater, Mass.

[From proceedings National Educational Association, 1886.]

* * * Two very practical questions remain for us as teachers. The two are these: What shall we teach? and How shall we teach it? That is, what shall we select from all the mass of material that has been prepared upon this subject for the young pupil? Much is especially adapted to them. Much we can give them with assurance. Many of the facts can be presented correctly, simply, and effectively to the children. And when we have made our selection, the important question comes, how shall we present the subject according to the best methods of teaching and in such a way as to lead to conviction on the part of the young. Let me say, what I am going to repeat a great many times throughout this discourse, that it is not mere knowledge that we are to teach—it is conviction that we are to bring to the minds and the wills of these pupils. Stopping with mere knowledge will not accomplish the work. What shall we teach?

First. A knowledge of the human body: Its external parts; the relations of those parts to each other: the uses of these parts, and especially the proper care of them; a knowledge of these delicate organs, the senses that we have and the work which they do for us, and the care which we should take of them; the work done by the important systems within our bodies, the way in which they do that work, and the care which they should receive from us—not merely a knowledge that we have certain parts, that we use them in certain ways, and that they can be taken care of in certain ways, but we should lead the mind to a profound conviction of the marvelous construction of our body, the delicate arrangement of its parts and the duty of each one of us to take the very best care of these houses of our souls. Not the mere knowledge, we repeat, but the conviction of the duty to care for these. This work is the preparation for the later work.

Second. A knowledge of the origin, properties, and uses of the various stimulants and narcotics; that the children may recognize them when they see them;

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that they may know the properties, and the effects upon the human body, and that they may know why alcohol has this certain influence upon the human body.

Third, and most important: That these narcotics, especially alcohol, tobacco, and opium, upon the human body; what they do and why they do it. Now, with your indulgence, I shall hope to offer a few suggestions in answer to these two questions, what shall we teach and how shall we teach it, with some very simple experiments. I have gone to the extreme of simplicity in order to avoid the objections which come from so many teachers who say: "I have had no practice in any laboratory. I am situated in a school where very few, if any, appliances are given to me." I wish to present that which can be used by every man and woman in every schoolhouse in this land; requiring no previous laboratory work, requiring no great outlay or expense. Of course in those schools which are more favorably situated, more advanced experiments may be conducted; but I intend to present those experiments which will give a sufficient knowledge of the effects on the human body, so that if it is taught rightly the children will be saved. Now, in this work, so far as I can show it before such a large audience, I will leave the subject of general physiology, and come directly to the subject of narcotics, their origin, their properties, and uses, and what they do to the human body; and I have selected for their principal work,

ALCOHOL.

I.—ORIGIN OF ALCOHOL.

1.—In fermented liquors.

Experiment 1. Add molasses to water in a bottle till it is of a deep brown color, then add a teaspoonful of yeast; allow it to stand in a warm place for a day or two. Observation: The mixture has the odor of alcohol, later a sour, acid odor; the mixture has a sharp taste. Inference: The little yeast has changed the sugar of the molasses to alcohol; this will change to acid if left alone. Call the yeast plant a "ferment," and the process of changing "fermentation."

Experiment 2. Allow apple juice to stand exposed to the air for a few days. Observation: The liquid has the odor of alcohol, also the biting taste. Later it has a sour, acid taste like vinegar. Inference: Very small ferments from the air have changed the sugar of the apple juice to alcohol. Call the liquid "cider." The alcohol will change to vinegar if left exposed to the air.

Cider is formed by the fermentation of apple juice in the air.

Wines are formed by the fermentation of grape juice, etc., in the air.

Ales and beers are formed by the fermentation of the sugar of grains. (Malt liquors.)

Alcohol is an essential constituent of all these fermented liquors; nature will change it to an acid if left to itself.

2.—In distilled liquors.

Experiment 3. Heat cider or wine in a test tube over an alcohol lamp; pass the steam through a glass tube into a bottle which is wrapped in a wet cloth to condense this steam. Observation: The odor and taste are more marked than in the fermented liquors; often there is a bitter taste. Inference: The condensed liquor is stronger than the fermented liquor and is changed into new substances oftentimes. Call this process of evaporating and condensing "distillation," and the resulting liquid a "distilled liquor."

Brandy is distilled from wines.

Gin is distilled from beer and flavored with juniper berries.

Whisky is distilled from the wort of fermented grain.

Rum is distilled from fermented molasses.

II.—PROPERTIES AND USES OF ALCOHOL.

Experiment 4. Examine alcohol for its color, odor, and taste. Place a little on the hand. Observation: Alcohol is a transparent liquid, has a strong odor, and a biting taste. Inference: The rapid evaporation of the alcohol makes the hand feel cool—it is a volatile liquid.

Experiment 5. Place a little in a spoon; apply a lighted match. Observation: It burns in a blue; hot flame. Inference: Alcohol is inflammable because it unites easily with the oxygen of the air.

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Experiment 6. Shake a little powdered resin in alcohol. Observation: The alcohol changed to the color of the resin; finally the resin disappears. Inference: Some resinous substances are soluble in alcohol.

Experiment 7. Mix a little oil of turpentine with alcohol; shake. Observation: The turpentine mixes with the alcohol. Inference: Alcohol will mix with some oils.

Experiment 8. Add alcohol to the white of an egg (albumen). Observation: The albumen changes the moist, mucilaginous albumen to a white, stringy solid. Call this "coagulation." Inference: Alcohol coagulates albuminous substances by extracting the water from them.

Properties.—Alcohol is a transparent liquid, odorous, has biting taste, is volatile. It dissolves many resinous substances, and mixes with most oils. It is inflammable, has great affinity for oxygen. It coagulates albumen, has attraction for water. Uses (resulting from these properties), external application to allay inflammation. Alcoholic lamps for heating purposes. A solvent for gums in preparing varnishes. In preparation of perfumery, medicines, etc. Preservation of museum specimens.

III.—EFFECTS OF ALCOHOL ON THE HUMAN BODY.

1.—*Alcohol impairs digestion.*

Experiment 9. Place with the finger a little alcohol on the inside membrane of the mouth (a mucous membrane);[1] repeat this several times. Observation: The membrane stings, the saliva flows freely, finally there is a dry, puckery feeling. Inference: Alcohol inflames the membrane, excites the flow of the liquid which it secretes, and absorbs the moisture in it.

Application.—The lining membrane of the mouth also lines the stomach and the other organs of the digestive system. A small amount of alcohol will cause a profuse flow of the gastric juice and pass very rapidly into the blood. A larger amount inflames and irritates the lining membrane of the stomach. A continued use weakens the quality of the gastric juice by the unusual and irregular flow, also impoverishes the blood from which it comes. It irritates the constantly inflamed membrane of the stomach, leading to an ulcerous condition and chronic inflammation.

Experiment 10. Add alcohol to raw meat, also rub some meat in water till it is well colored with blood, add alcohol to this blood. Observation: The liquid is full of white particles and the meat seems hard. Inference: The alcohol has coagulated the albumen of the meat and blood.

Experiment 11. Add alcohol to some of the pepsin of the gastric juice. Observation: The pepsin contains white, stringy particles. Inference: Alcohol coagulates pepsin.

NOTE.—To prepare the pepsin get from the butcher the inside membrane of a pig's stomach, cut into fine pieces and soak it in glycerine for a few hours. The glycerine dissolves the pepsin; strain through a fine cloth. Prepared pepsin can be bought of the druggist.

Application.—Pepsin is the active solvent of the gastric juice. Alcohol tends to harden the food and coagulate the pepsin, thus retarding digestion. Continued use tends to chronic indigestion and to the intensifying of any disease of the digestive system.

2.—*Alcohol absorbs the water of the body.*

Refer to experiments 8 and 9. Alcohol not only absorbs water from the albumen which it coagulates, but the whole system floods it with water to dilute it and render it less harmful. Hence alcohol absorbs the water of the saliva, of the gastric juice, of the blood, of the tissues, and of all the secretions. This soon results in a craving for fluid to supply the body, really a "thirst" for water, requiring time for its absorption throughout the system, but temporarily satisfied by more exciting drink.

3.—*Alcohol destroys the blood corpuscles.*

Experiment 12. Prick with a pin under the finger nail and draw a drop of blood; place this on a bit of glass and examine with a magnifying glass. Observe the way in which the little blood corpuscles are arranged. Touch them with the smallest amount of alcohol. Observation: The corpuscles are of an

[1] I would never do that or teach others to.—M. H. Hunt.

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irregular shape and have lost part of their color. Add more alcohol. Observation: The corpuscles are an irregular mass of a whitish color. Inference: Alcohol coagulates the albumen of the corpuscles and dissolves the coloring matter. Refer also to experiment 5.

Application.—Alcohol at once enters the blood, seizes the oxygen that the red corpuscles are carrying to the various parts of the body, dissolves the coloring matter, and coagulates the albumen of these corpuscles; hence the blood partially fails in its work of carrying new matter to the tissues and in eliminating the waste matter. The result is a clogging of the system with effete matter, poisoning of the blood, diseases of the skin, liver, and kidneys. The retarding of the combustion within the body lowers its temperature in direct proportion to the amount of alcohol taken.

4.—*Alcohol ruins the blood vessels.*

Observe the crust of earthy matter on the inside of bottles of grape wine. Inference: The earth matter which was soluble in the grape juice is thrown down by the alcohol in the wine.

Application.—The mineral matter is being carried by the blood to the bones, is precipitated by the alcohol, and forms a crust in the blood vessels and in all the tissues, making them weak and brittle. As a result blood vessels burst under any unusual strain, and apoplexy results.

5.—*Alcohol paralyzes nerve matter.* (*A narcotic.*)

Experiment 13. Etherize or chloroform a frog by soaking a wad of cotton and putting it in his mouth, or place a spoonful of ether in a jar of water and immerse the frog. When insensible carefully cut upon the skin and flesh of the leg till the nerve is exposed. Touch a drop of alcohol to the exposed nerve. Observation: The nerve becomes stiff and white, the trembling of the limb ceases. Inference: Alcohol has paralyzed the live nerve matter.

Application.—A small dose of alcohol causes incipient paralysis of the nerves of the tissues and brain; this causes an extra activity for the purpose of diluting and expelling the poison from the system, manifested by the "animated appearance, the throbbing of the arteries, the flush of the face, and the sparkle of the eye." This paralysis also numbs any feelings of pain, apparent benefits arising from previous paralysis. The paralysis of the nerves controlling the muscular walls of the capillaries weakens their elasticity, at the same time the heart increases its action, hence the blood tends to remain near the surface, and an extra radiation of heat takes place, a second reason for the lower temperature of the body.

Increase the dose and the paralysis of the brain increases in this order: First, of the delicate nerve matter of the superior brain (cerebellum), blunting the highest functions, reverence, modesty, love, etc., its reflex action is the loss of control of the connecting nerves, thus moral power fails and the lower nature is supreme; second, the part of the brain controlling voluntary motion is paralyzed, and also that part which is said to preside over the thoughts (cerebrum), at the same time the nerves are paralyzed, resulting in an insensibility to pain and injury—this goes on till a person is "dead drunk;" third,—the last part of the nervous system affected is that which controls the involuntary actions, breathing, etc.—this paralysis causes death.

Continued use leads to a degeneracy of nerve matter and tissue by the constant paralysis and repair, because the structure of the nerve matter is changed, hence "disorders occasioned by the strain imposed on the system, diseases traceable to the general degeneration of the system, and diseases which might otherwise be averted or resisted;" finally the insatiable demand for alcohol: diseases of the nerve, delirium, and death.

This extra exertion of the organs tends to weaken them, which accounts for the fact you are all familiar with, namely, that when a person is taken with a serious disease and is brought to the hospital the first thing the physician or surgeon who comes to him says is: Has this person been using alcohol? Yes; and he shakes his head. There is a question about that. That extra exertion of those organs which has been going on eliminating poison from that man makes it impossible for those organs to resist the terrible strain of a new disease. The physician says to another: Has this person used alcoholic liquors? No. Then we will try to pull him through. Those organs have not been exerted under that terrible strain. Now the effect on this nerve matter of pulling

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it down, paralyzing it to-day, then mending it, pulling it down, and to-morrow mending it, paralyzing it a little more the next day, and mending it again, changes the constitution of that nerve matter so that it gets into what we call a diseased condition. And there is a second reason for this terrible thirst that comes over a man. Such thirst that nothing, as he says, in heaven or earth will stop him in getting that liquor; and why? Because of the changed condition of that nerve matter, and it looks as if there was no remedy for him. Surely it is a terrible condition for a man to reach.

Now, without going further, I think I have made the points that I desire: That in teaching these points we should lay the foundation on simple experiments (with substances which are the same or similar to those of the human body), performed by the pupils themselves. That, I say, should be the foundation. Then we should apply these facts and explain the action on the human body. This may be supplemented by reading, not from one book, but from many books, of the effects, which can not be shown by simple experiments, but which are the result of difficult scientific experiments and of medical experience.

Now let me leave these thoughts with you: Teach very carefully out of a full knowledge of the subject; discriminatingly, not with exaggeration, but for the purpose of finding the truth, the whole truth, and nothing but the truth. Teach scientifically, according to the principles of the very best science, basing the work upon experiments in the hands of the pupils. Teach impressively. As I said at first a person may know all about these facts that I have presented and yet go right on doing just the same thing as before. The lessons should be taught in such a way by the teacher as to bring conviction and decision to the minds of each one of the children. Any teacher that fails to reach that point has failed in moving the wills of the children. Teach for the sake of developing right habits and good character.

III.—THE LEGISLATION EFFECTED.

The following table shows what States have enacted compulsory temperance education laws and gives the principal features of the different laws:

Table showing the States having temperance education laws; also the date of enactment and the chief requirements of the different laws, as compiled by Mary H. Hunt.

Explanation of marks.

× The cross signifies that scientific temperance is a mandatory study in public schools. (Column 3.)

* The star signifies a penalty attached to the enforcing clause of this statute in the State or Territory to which it is affixed. (Column 4.)

† The dagger signifies that the study is not only mandatory, but is required of all pupils in all schools. (Column 5.)

‡ The double dagger signifies that the study is required of all pupils in all schools and is to be pursued with text-books in the hands of pupils able to read. (Column 6.)

‖ The parallel indicates that the study is to be taught in the same manner and as thoroughly as other required branches. (Column 7.)

§ The section mark indicates that text-books on this topic used in primary and intermediate schools must give one-fourth their space to temperance matter and those used in high schools not less than 20 pages. (Column 8.)

¶ The paragraph indicates that no teacher who has not passed a satisfactory examination in this subject is granted a certificate or authorized to teach. (Column 9.)

The States in italics have no temperance education law.

1	2	3	4	5	6	7	8	9
North Atlantic Division:	Enacted:							
Maine	1885	×	*	†				¶
New Hampshire	1883	×						¶
Vermont	*a*1882	×	*		‡	‖	§	
Massachusetts	1885	×		†		‖		¶
Rhode Island	1884	×		†				
Connecticut	1886	×						¶
New York	1884	×		†				¶
New Jersey								
Pennsylvania	1885	×	*	†		‖		¶
South Atlantic Division:								
Delaware	1887	×		†				¶
Maryland	1886	×			‡	‖		
District of Columbia	*b*1886	×	*		‡	‖		¶

a Amended 1886.

b Under United States law. Idaho and Wyoming have since continued the same provisions in their State codes.

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1	2	3	4	5	6	7	8	9
South Atlantic Division—Continued.	Enacted:							
Virginia								
West Virginia	1887	×	*	†				¶
North Carolina	1891	×	*		‡		§	¶
South Carolina								
Georgia								
Florida	1889	×			‡			¶
South Central Division:								
Kentucky								
Tennessee								
Alabama	a1885	×			‡			¶
Mississippi	1892							
Louisiana	1888	×	*		‡		§	¶
Texas								
Arkansas								
North Central Division:								
Ohio	1888	×	*	†				¶
Indiana								
Illinois	1889	×						¶
Michigan	b1883	×	*	†	‡		§	¶
Wisconsin	1885	×		†				¶
Minnesota	1887	×	*	†				¶
Iowa	1886	×	*	†				¶
Missouri	1885							¶
North Dakota	1890	×	*		‡		§	
South Dakota	1890	×	*		‡		§	¶
Nebraska	1885	×		†				¶
Kansas	1885	×		†				¶
Western Division:								
Montana								
Wyoming	c1886	×	*		‡			¶
Colorado	1887	×	*		‡			
New Mexico	c1886	×	*		‡			¶
Arizona	c1886	×	*		‡			¶
Utah	c1886	×	*		‡			¶
Nevada	1885	×						
Idaho	c1886	×	*		‡			¶
Washington	1890	×	*					
Oregon	1885	×		†				
California	1887	×	*	†				
Alaska	c1886	×	*		‡			¶

a Date of original law; a more stringent one enacted in 1891.
b Amended 1886.
c Under United States law. Idaho and Wyoming have since contained the same provisions in their State codes.

IV.—THE ENFORCEMENT OF TEMPERANCE EDUCATION LAWS.—REPORTS AND OBSERVATIONS OF SCHOOL OFFICIALS.

ALABAMA.

The Alabama law of 1885 required that "instruction shall be given all pupils in all schools and colleges, supported in whole or in part by public money or under State control, in physiology and hygiene, with special reference to the effects of alcoholic drinks, stimulants, and narcotics upon the human system."

In 1889, out of 261,667 pupils, 19,211 are reported as studying "physiology and hygiene."

In 1891 a law more rigid in its requirements was enacted.

CALIFORNIA.

[*From Report of State Superintendent Ira G. Hoitt, 1890.*]

Teaching desultory and results inappreciable.—The provision in our law requiring scientific temperance instruction to be given in all grades was adopted by the legislature of 1887.

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Up to the present time the teaching has been desultory and the results inappreciable. Some teachers are earnest and enthusiastic on the subject, many take hold of it in a cold, perfunctory way, and many, I fear, neglect it altogether. Some teachers, when the law was passed, found themselves unprepared to do anything in that line, and, not having the fear of an examination before them, failed to make any adequate preparation. Some of the county boards very properly required an examination of their teachers in this subject and entomology before issuing renewals of certificates. The course of study suggested by the State board of education supplies the data for some years only.

I would suggest that county superintendents give this subject a more prominent place at their institutes and in their teachers' examinations and that pupils be examined thoroughly in the work prescribed for each grade; also, that by legislative enactment scientific temperance be added to the branches in which applicants for teachers' certificates must be examined, and that the words "intemperate habits" be added to the clause bearing upon the revocation or suspension of certificates.

If this were done the almost universal desire which I have observed among our superintendents and teachers to uphold the law would produce beneficial results in this direction.

SAN DIEGO.

Methods of instruction.—Eugene De Bum, superintendent of San Diego schools: In connection with the work in physiology, alcoholic drinks and narcotics are treated of as fully in each grade as the comprehension of the pupils will permit. The teacher talks with the class of the manufacture of alcohol, its uses in the arts, and the beverages in which it is found. A brief history of tobacco is given with the process of manufacture and the ways in which it is used. The descrip, tion, uses, and hygiene of each part of the body; the skin, the muscles, the bones, the stomach, the lungs, etc., are taught; the effects of alcohol and tobacco are given with the hygiene. Caution as to using other narcotics, as opium and morphine, is given the pupils. This work is not only laid out in the course of study, but it is done in the school room.

COLORADO.

Generally observed.—State Superintendent L. S. Cornell reports (1888): The temperance law passed by the last legislature has been generally observed throughout the State. In all of our schools instruction as to the effect of alcohol and narcotics on the human system has been given. The law, as passed, is somewhat vague and indefinite, yet it has been obeyed as the school boards understood it.

Douglas County reports (1890) the law as "generally enforced."

CONNECTICUT.

REPORTS OF SCHOOL VISITORS.

Lack of text-books and of interest.—The evident intention of our legislators in the law requiring the study in our schools of physiology as connected with alcoholism is not being realized as it should be, owing to a lack of appropriate textbooks, as well as a lack of interest in all concerned. The devastation, moral, physical, and financial, resulting from the drink traffic, calls for a more full and clear understanding of the direful effects of indulging in alcoholic drinks, and also tobacco in its various forms, that those who persist in going the downward road may not present the plea of ignorance as an excuse. Statistics of classes pursuing a college course show conclusively that those who indulge in the use of the weed rarely attain to the highest position mentally or physically. Fashion and habit hold a tyrant's sway over the boys who think they have attained to manliness when they can sport a cigar, or flood the spittoon, the floor, or the walk with foul tobacco juice; and we know the natural tendency of this habit is to lead on to the saloon. The moral obtuseness of those addicted to the use of strong drink is something startling to every thoughtful mind. The great majority of the accidents and crimes which are so appalling are directly traceable to alcohol, which is the provocative of nearly every sin in the calendar. I shall probably be accused of want of liberality in this matter, but when our law-

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makers in their wisdom have seen fit to place such a law on the statute book, it is well for us to heed it, especially when we are charged with the moral and physical, as well as mental, wellbeing of the young in our communities.—Plymouth, L. D. Baldwin, acting visitor.

Regularly and faithfully taught.—The subject of physiology and hygiene has been regularly and faithfully taught. A conscientious effort has been made to select and teach the facts best adapted to the mental status of the pupil, and to impress him with the importance of obeying the laws of health which a consideration of the body and its complicated machinery suggests. So far as practicable scientific terms are avoided, and the matter is presented in language within the comprehension of the pupil.

The composition and nature of alcohol and tobacco are studied, and the effects which they produce when taken into the system. The evils which flow from their long-continued use are pointed out, and the effort made to create an impression which will result in total abstinence.—Norwich Central District, N. L. Bishop, superintendent.

DELAWARE.

Growing more and more popular.—Superintendent James H. Ward, of Sussex County, reports: The study of physiology and hygiene is growing more and more popular every year. Three years ago these two branches were introduced into our schools. During the first year comparatively few schools used the book, but now nearly all the schools in the county are making use of it; and very soon none, we think, will be without it. The teachers prove themselves in the examinations to be much more conversant with these subjects now than they were three years ago, and their interest will, of course, to a great extent assure us of the interest and advancement of the pupils in this part of a popular education. We feel gratified that the people begin to show themselves interested in this work, and begin to feel that the laws of health should be taught in our schools, and that the principles of temperance instilled into the children's minds should be considered a part of a good, substantial education.

ILLINOIS.

State Superintendent Richard Edwards (1890): During the last session of the legislature a law was passed requiring that instruction be given in the laws of health and in regard to the effect on the human system of narcotics and alcohol. Whatever opinions may be held concerning the liquor traffic, every intelligent man will welcome all honest efforts to enlighten the people in regard to the physical effects of narcotics and intoxicants.

IOWA.

[*From Report of State Superintendent Henry Sabin, 1888-89.*]

Scientific temperance instruction.—The law requiring that regular instruction shall be given in all the public schools of the State having special reference to the effects of alcoholic drinks, stimulants, and narcotics upon the human system has been the subject of much thought and attention. I believe the law has been steadily growing in favor, and that its provisions are generally complied with by our teachers. Not only has the attention of teachers been called to the absolute necessity of obeying the letter of the law, but in most of our county institutes valuable instruction has been given in methods of teaching this branch and in the arrangement of the subject-matter, so as to make the teaching most effective.

In response to many inquiries, in May, 1888, the following circular was distributed among the teachers for their guidance and direction:

To county superintendents and teachers of Iowa:

We are often asked as to the limit of instruction in the branch of scientific temperance instruction.

The evident intent of the law is to place the teaching of the nature and effects of stimulants and narcotics upon the same basis as other branches taught in our public schools. The pupil gains his knowledge of arithmetic by successive steps; he must pass an examination in one part of the subject, and show his familiarity with it before he is advanced to the next division. Scientific temperance instruction should be treated in the same manner. One portion should be thoroughly mastered before the next is entered upon. If this is well done, the teacher will often find work enough in one part of the subject to employ and interest the pupils during a whole term. Careful consideration will convince us that the work in this branch of study is too superficial in many of our schools, because we are attempting more in a given time than can be done well. Temperance instruction needs to be reduced to a system.

We suggest the following plan:

In the first division, intended for little children, let the work be entirely oral, and confine the subject-matter largely to the simple rules of health, as cleanliness, exercise, and habits of eating and drinking, with but little of physiology or anatomy.

In the second division, instruction should still be given orally, but an advance may be made, in that the pupil should be required to carefully reproduce what has been given him, and to commit to memory facts and principles, so as to make them his own. The department of hygiene may be enlarged, and something of the mechanism of the body may be added. It is to be noticed, however, that this oral work should be very carefully prepared, with method and thought, in order to adapt it to the capacity of the pupils. It is of especial importance in these two divisions that you give, if possible, a strong bent to the child's mind against the use of liquor and tobacco.

In the third division the use of the text-book should begin. Here more individual study and work on the part of the pupil is necessary. It would not be well to endeavor to cover the whole ground of physiology and hygiene. The functions of the more important organs only should be thoroughly studied and explained. The action of stimulants and narcotics upon these organs should be faithfully impressed upon the child's mind.

In advanced divisions the whole subject of the human body, its mechanism, its needs and protection, may be carefully studied. At this stage a few of the more important technical names may be learned, and the functions of the various organs more minutely described.

In all your work care should be taken to give instruction in accordance with the spirit of the law. Total abstinence should be taught as the only sure way to escape the evils arising from the use of alcoholic drinks and tobacco. This systematic plan, if carefully followed, will insure a more thorough understanding of the subject, and teachers will not complain that they have used up all their material.

Allow me to suggest to county superintendents that you give this study, especially as it has reference to the effects of stimulants and narcotics upon the human system, the attention which it deserves at your coming institute; and that at examinations you submit to your teacher short but comprehensive questions to test their knowledge, as required by section 3 of the law. * * *

Reports from every county in the State indicate that there is a very general desire to administer the law faithfully. Considering the difficulties naturally arising when a new branch is introduced into the course of study, the progress made is very encouraging. The attention the subject received last year in institutes greatly assisted teachers in their work. Our confidence in the fidelity of the school officers and instructors of Iowa to any trust imposed upon them makes us certain that much more will be accomplished during the coming year. To assist in this important work the hearty coöperation of all is invited.

HENRY SABIN,
Superintendent of Public Instruction.

DES MOINES, *May 20, 1888.*

The code should be amended so as to require the teacher to include in his register, which he files with the secretary at the close of his school, a certificate that he has fully complied with the provisions of the law. Section 1745 should also be amended, so that the secretary should be required to furnish the county superintendent with a transcript of the action of the board, as required by laws of 1886, and also with the names of those teachers who have and those who have not filed the required certificate.

The attempt to teach the children and youth the injurious effects of stimulants and narcotics promises great good to the cause of temperance. The aim of such instruction should be to fortify the child against the formation of bad habits in his youth, and to lay the foundations upon which to build the higher work of strengthening the will, so that he may be able to resist temptation from whatever source it may come. In this connection I am free to say that I believe there should be upon our statute book a law making it a misdemeanor, punishable by a heavy fine, to sell tobacco in any form to a minor under 16 years of age. The necessity of such a law is becoming more apparent every day, and we ought not longer to delay its enactment.

Statistics.—Reports from the township boards indicated "that the law had been complied with in its spirit" in every township without exception; also that the teachers were "skillful in giving the instruction required by law."

In 1890, out of 15,762 schools, the effects of stimulants and narcotics were taught in 15,097.

KANSAS.

We should unite to make the teaching a success.—State Superintendent J. H. Lawhead (1886): A vigorous mind inhabiting a healthy body can do more for the State than the same mind can in a body that is weak and diseased; and as the public school is sustained at public expense upon the theory that the permanency of the State depends upon the intelligence of its citizens, the State claims the right to have those branches taught in her schools that will best secure these results. Now a thorough knowledge of the human system is essential to its preservation and highest development, which can only be secured by a study of its physiology and hygiene, and the effects of such substances as may be deleterious to its growth and the healthy exercise of its various functions; and it has

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been decided by the best medical authority, as well as by universal observation of mankind, that both alcoholic stimulants and narcotics exert a baneful and destructive influence, not only upon the body and its various functions, but it likewise destroys the intellect and deadens the moral sensibilities. In view of all these results, we, as school officers and good citizens, should unite to make the teaching of the effects of alcoholic stimulants and narcotics upon the human system a success. We should supply our teachers with all the necessary appliances to secure the best results, and furnish our schools with the best maps, charts, and books, to enable the teacher to perform his part in this great work. I am pleased to note that teachers throughout the State have, in most instances, taken hold of this subject with an earnestness that is full of promise for good results.

MAINE.

Obstacles to the execution of the law.—State Superintendent N. A. Luce reports (1890): The results of the law requiring instruction in the hygienic effects of stimulants and narcotics have not been fully up to what was hoped and expected when enacted. Three obstacles have stood in the way of such results:

1. In the smaller rural schools where failure has been most general, the incompetence of the teachers has been the cause of such failure. In such schools of necessity the instruction must be largely oral because of the primary character of those to be taught, and such instruction to be efficient presupposes teachers of higher professional grade than is required to give instruction from text-books. Efficient oral work, except in rare cases, can be done only by those trained and practiced in such work.

2. The unwillingness of parents to purchase text-books has hitherto been an almost insurmountable obstacle not confined to any class or grade of schools. While oral teaching in this as in other branches is most efficient with primary classes, it is otherwise with those more advanced. With these the text-book is a necessity.

3. The inertia of public opinion—a quite general feeling that this instruction is of minor importance—has not only been in large measure the producing cause of the two obstacles already cited, but an obstacle in and of itself. Schools both in their instruction and supervision are quick to respond to the condition of public opinion. Had there been sharp public demand that every child in every school should be taught as the terms of the law require, a demand watchful and exacting, there can be little doubt that cases of utter ignoring of law would have been rare, and that pupils and teachers would everywhere have been affected by that demand.

The first of these obstacles can be removed only by such reform in our system as will lift these poorer schools out of their present condition. The second has been largely removed by the furnishing of free books. The third will disappear only as the result of a "campaign of education." To bring this instruction up to the efficiency desired by those who believe in its vital importance, calls not for law but for labor. Law can not create public opinion, but public opinion will compel the observance of law. Labor with teachers is needed to awaken them to deeper interest and more earnest effort; with school officers to force them to full exercise of their authority; and especially with the people to educate them to an intelligent appreciation of the value of the results sought. Such labor is the privilege, and the duty as well, of those by whose efforts the law was enacted and of all others who believe in its wisdom.

Statistics.—In 1889, out of 3,894 ungraded schools, 2,557 had classes in physiology.

In 1890, out of 3,909 ungraded schools, 2,426 had classes in physiology.

MASSACHUSETTS.

Object and methods of the instruction—Exaggerated statements to be avoided.—G. T. Fletcher, agent of the State board: This is required to be given in connection with "physiology and hygiene, which are to include special instruction as to the effects of alcoholic drinks, stimulants, and narcotics on the human system."

Right and faithful teaching in this line may prove of great value to the Commonwealth, and the subject should secure careful consideration from school officials and teachers. The reports of school committees seem to indicate that some effort is made in every town to comply with the requirements of the law.

My personal observation convinces me that the methods and results are not satisfactory. Many teachers desire to do justice to the subject, but they plead,

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as an excuse for neglect, lack of time and knowledge.' Perhaps a brief consideration of the object of the instruction may suggest a method.

The teaching is to lead the child to form temperate habits of living. His knowledge of the danger of indulgence in the use of narcotics and intoxicants must lead to a development and exercise of will power sufficient to enable him to resist temptation. The education must be intellectual and moral, to induce the habits of thought and action necessary to good citizenship. The instruction should be true, simple, and earnest, largely objective; illustrations may be drawn from life, pictures, and recorded facts. Personalities and allusions that will wound the feelings of children should be avoided. No exaggerated statements of the evils to be shunned should be made; they are not wholly true, and they will react against the cause.

For young pupils good temperance stories are valuable. I am inclined to think that most temperance teaching should be oral, the school being supplied with such books and charts as will be helpful to teacher and pupils for reference. Truths from scientific investigations, and facts and figures from other reliable sources, may prove valuable. Not so much for school as for life the children need temperance instruction, and the teacher should honestly, faithfully, as well as intelligently, endeavor to make lasting impressions.

Begin with the teachers.—State board of education: The statutes require that physiology and hygiene shall be taught in all the public schools as a regular branch of study, and that the teaching shall have special reference to the effect of stimulants and narcotics upon the human system. The board has instructed its agents to make particular inquiry as to the manner in which this requirement is met. They report that the disposition is very general to comply with the law, but that very much of the teaching under this head is defective and of little value, owing to the inability of teachers to deal with the subject. In the judgment of the board, therefore, especial attention must be given to the training of teachers to teach this branch of learning before the results expected from its introduction into the schools will be produced.

MICHIGAN.

Overteaching is perilous.—State Superintendent Theodore Nelson (1886): In my opinion it is the design of the law to give to this class of studies the same status it gives to other practical topics, such as reading or grammar, *i. e.*, that somewhere in his course the pupil shall be taught the physiological and moral effects of narotics and alcoholic stimulants upon the whole being of man. To my mind this is quite enough. Less would be insufficient; more would be unnecessary, and possibly harmful. It is to be regretted that in any public school the full requirements of the law should suffer neglect; yet it would be a mistake quite as serious to give to these special studies a disproportionate, unequal place in the school curriculum—to coördinate them, as some extremists insist upon doing, with every other subject from the low zones of a, b, c up to the high regions of calculus. Overteaching upon a subject which relates to moral conduct, especially if it concerns the appetites or passions, is really perilous. Too constant dwelling upon topics of this character has a tendency to invoke morbid conditions in the mind of the youth which either provokes or fascinates him to attempt dangerous experiments. Were you to teach a boy the flagrant wickedness of burglary it would not be expedient, nor would it be necessary, to induct him into the mysteries of picking a lock. The specialist finds a peculiar charm in the ugly spider; he sees a thousand beauties in the bright colors and sinister eyes of a loathsome snake. We may well fear the consequences of making our boys and girls too familiar with nauseating details of any evil which we desire them to shun. The teacher or parent can not be too earnest to enjoin correct principles, to give warning of penalties, and to himself exhibit a blameless example: which having done he can effectively add nothing further, except to devoutly leave the result with God.

Statistics.—In 1890, out of 10,810 school districts, 5,701 reported physiology taught, and 4,768 reported physiology not taught; 341 districts failed to report.

MINNESOTA.

Temperance in the broader sense.—State Superintendent D. L. Kiehle (1888): The reports from the counties indicate a purpose to honestly execute the law. The subject is doubtless as well taught as others are. The children are easily

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interested, and I have no doubt will derive much permanent good through the skill and example of good teachers. Nothing should be left undone that will fix in the minds of our youth a sense of the folly and danger of the use of alcoholic beverages, and a resolution to entirely abstain from their use. I therefore cordially support this law, and have, so far as I know, used every means to administer it thoroughly. It ought, however, to be noted in a report upon education, as this assumes to be, that temperance in the restricted sense of abstinence from the use of any kind of food or drink is in itself but a negative virtue, and must therefore in an educational view take a subordinate place in any curriculum of instruction. Character is determined by what a man is, and not by what he is not, by what he does, and not by what he does not do. Hence, education having to do with the whole man in his health, intelligence, and character, it has chiefly to do with the positive virtues of temperance in the broader sense of self-control and the subordination of appetite and passion to the authority of the higher moral and intellectual natures, of high purposes in choosing worthy objects of life, of pure tastes in the love of the good, the beautiful, and the true. These receiving the first place, a secondary consideration should in reason be given to what is destructive and inconsistent with what every wise man should be, and for what he should live.

Reports of county superintendents—(1890).

Anoka County.—No opposition has been made to the instruction in temperance hygiene. Both teachers and pupils seem to enjoy this subject. Anatomical charts have been purchased for about two-thirds of all the schools. The greatest difficulty seems to be in getting parents to supply the children with books.

Douglas County.—Instruction in temperance hygiene has been systematically and regularly given in all schools, since the law requiring it became operative. The books recommended by the commission have been used exclusively and have given the best of satisfaction.

Lac qui Parle County.—No objection to the teaching of this subject in the schools has been heard. In nearly all of the schools it is taught, and I believe there is no subject more entertaining to the little ones, or one that will be of more importance to them in their general education. The teachers in nearly all of the schools use the book recommended by the commissioner.

Meeker County.—Temperance hygiene has been taught in every school without exception. In some instances, however, threats had to be resorted to in order to induce school boards to do their duty in this respect. All the teachers have been loyal and active in doing their parts in fulfilling the law.

Redwood County.—The temperance hygiene work is quite satisfactory. Teachers feel the need of good, earnest work on this subject. Nearly all make place for it on their programme. Some try it on the three times a week plan. What have we accomplished in the work, no one can tell. We shall know more five years hence.

Swift County.—Temperance hygiene has found a place on every programme in our schools, and the law is well observed.

Wilkin County.—Instruction in temperance hygiene has been given in this county, I think, very thoroughly and has been met with no opposition.

MISSOURI.

The law a farce and a fraud.—The law on teaching the evil effects of alcoholic stimulants and narcotics upon the human system is a farce and fraud. It is virtually a prohibition against temperance instruction in the public schools. And strange as it may appear, those who claimed to favor proper legislation upon this subject, favored this measure, while they rejoiced over the defeat of Senate bill No. 52, which required such instruction in all schools of the State. The law as it stands is worthless, and should be repealed or amended. (State Superintendent W. E. Coleman.)

MONTANA.

Montana without a law.—State Superintendent John Gannon (1892): The only law upon our statute books relating to the teaching of the effects of stimulants and narcotics is that known as the "Blair bill," approved May 20, 1886; but as that applied only to the Territories, it became void upon the admission of Montana into the Union, and has not been reënacted by our legislature; though

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teachers are still examined in "physiology and hygiene, with special reference to the nature and the effects of alcoholic drinks and other narcotics upon the human system."

Statistics (1890).—Out of three hundred and sixty-one school districts in the State, physiology and hygiene were taught in three hundred and thirty-six.

NEVADA.

Scientific knowledge necessary.—State Superintendent W. C. Dovey (1890): The legislature passed an act in 1885 which provides that elementary physiology and hygiene, which shall give special prominence to the effect of alcohol and narcotics upon the human system, shall be taught in the public schools. No wiser provision is found in our school law. Scientific knowledge on this subject, though very primary, will do more in shaping the habits of the children in this respect than can be done by appeals to his moral nature or by reviewing the terrible degradation and ruin which its use has inflicted upon the human family. Reasons, stronger than sentimentalism, excite in him a wise fear of the tippler's habit. The following figures show that the great body of our teachers are in hearty accord with this law: Number of children studying physiology in 1885, 365; in 1886, 851; in 1887, 1,602; in 1888, 2,150; in 1889, 2,265; in 1890, 2,283. [out of 7,387 pupils enrolled]. In six years the number has increased from 365 to 2,283. This item is a source of thankful congratulation to every intelligent friend of the rising generation.

NEW HAMPSHIRE.

Nearly all schools complying with the law.—State Superintendent J. W. Patterson (1890): In the year 1883 an act was passed, without any material opposition in either house, which required school boards to prescribe in all schools sufficiently advanced the study of physiology and hygiene, with special reference to the effects of alcoholic stimulants and narcotics upon the human system. To prevent evasion by those not favorable to the law, it was amended in 1887 so as to require the introduction of this study in "all mixed schools and in all graded schools above the primary."

Being deeply interested in the execution of the law, I endeavored to inform myself as to how far it had been complied with and the spirit with which the subject was taught. It took a year or two to qualify the teachers to do even respectable work in this branch. There were a few towns which ignored the law, as every sensible man knew there would be, and there were others that complied with the letter of the law and violated its spirit. But as time went on I was gratified with what seemed to me as general a compliance with the law as any one had reason to anticipate.

I was, therefore, greatly surprised and not a little annoyed when his excellency the governor, in his inaugural, stated that so far as he could learn the law had been "almost entirely disregarded." I said to myself, either I am mistaken or the governor has been misinformed, and the public has a right to know whether the law is a dead letter or not. I therefore inserted the following questions in the statistical blanks sent to the school boards for their annual returns: 1. Give number of schools in which physiology and hygiene are taught with text-book. 2. Give number of schools in which they are taught orally.

All but eight towns in the State responded to these questions, and the result is as follows: In 946 schools physiology and hygiene are taught by text-books, and in 817 they are taught orally. This gives us 1,763 schools out of 2,302 in the State in which the law has been regarded, leaving only 539 in the whole State in which the subject is not taught. This number would be considerably reduced by the statistics from the eight towns not heard from. It is gratifying to learn from the school boards, who know the facts, that nearly all the schools of the State, except the primary, in which the subject is not required to be taught, are complying with the requirements of the law. Clearly his excellency the governor, whose scrupulous loyalty to facts and fearless fidelity to the cause of temperance all men must respect, was misinformed by parties who presumed to advise on matters in respect to which they had no definite knowledge.

I do not claim that the subject is taught with great thoroughness in some of the schools, but I presume it is up to the average teaching in other studies in those schools. The limitations are in the qualifications of the teachers, and will be removed with their improvement.

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NORTH DAKOTA.

Statistics.—In 1889, out of 30,024 pupils, 18,523 studied physiology and hygiene. In 1890, out of 30,821 pupils, 21,301 studied physiology and hygiene.

OHIO.

Statistics.—In 1889: Number of pupils, 777,162; number studying physiology, 155,621.

In 1890: Number of pupils, 797,439; number studying physiology, 236,901.

PENNSYLVANIA.

Such knowledge is of vast account.—State Superintendent E. E. Higbee (1885): In regard to the recent law requiring physiology and hygiene to be taught as part of the necessary curriculum of our public schools, a word here may not be out of place. Of course, where children can not read intelligently or with ease, it would be a monstrous perversion of ordinary common sense to expect them to use a text-book. Their instruction, to be such and not a farce, must be oral; and such instruction must and ought to be given, properly adapted to the age and attainment of the pupil. In higher grades, text-books in full conformity with the meaning and purpose of the law should be used; and thus all pupils, whether of low or high grades, will receive instruction. Only enmity to the law can warrant such an interpretation as will defeat its own purpose, which plainly is, that all our children shall gain as much knowledge of physiology and hygiene as our common schools, with their limited sphere, can give, accompanied at each step with a proper practical application of this knowledge in reference especially to the effects of alcohol and narcotics on the human system. Such knowledge is in itself of vast account; and such special application of it, in way of warning, properly belongs to the moral discipline which should characterize all teaching, whether required by definite statute or not. The law-abiding habits of teachers and directors give abundant assurance that this law will be fully obeyed. We are willing that time shall demonstrate how far it may serve to remove one of the greatest curses that pollute social life. The fathers and mothers of this Commonwealth will be more than thankful for anything which may aid their children in keeping away from those temptations which they themselves so much fear, and from which so many of them have been made miserable and broken hearted.

In harmony with public sentiment—The right to impart such instruction unquestionable.—State Superintendent E. E. Higbee (1886): The practical operation of the act of assembly requiring the subject of physiology and hygiene, with special reference to the effects of alcohol and narcotics upon the human system, to be introduced in the schools as a legal branch of study, strengthens and confirms our belief in the wisdom of the law. The act was approved April 2, 1885, and went into effect at the beginning of the school year, in June following.

The commendable spirit in which the measure was so generally acquiesced in by the patrons of the schools, its prompt enforcement by directors, the earnest coöperation of superintendents, and the willingness of the teachers to comply with its provisions by a ready performance of the duties required of them, offer an unanswerable argument in proof of the fact that such instruction given to the children in the public schools is in favor with the people, and in harmony with a strong and growing public sentiment throughout the Commonwealth.

There have been shortcomings in some instances and partial failures in others, but there are few indeed in comparison, and occasioned more, we believe, by a misunderstanding of the law's requirements than by a disposition to evade its provisions. All things fairly considered, the friends of the measure have cause for congratulation, and even the most sanguine and hopeful of its advocates can find much to commend in the work of the first year.

The good results that will come from judicious and timely instruction in the subject will in the near future demonstrate the practicability of temperance teaching in the public schools, and will fully justify the policy of the course pursued.

The principles underlying moral instruction in the schools as a proper preparation for good citizenship, as well as to afford protection and safety to the individual, are pressing themselves more forcibly to-day than ever before upon the

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earnest attention of our teachers. The causes, only too clearly discernible, that make such teaching an absolute necessity need not here be referred to.

The right to impart such instruction can not be questioned with any degree of sincerity or consistency, and when made an imperative and lawful requirement by the State, it becomes the duty of all concerned to render willing obedience thereto.

Gaining favor with teachers and pupils.—State Superintendent E. E. Higbee (1888): Scarcely any difficulties have arisen in reference to the comparatively new study of physiology and hygiene made obligatory by law. The teachers at the outset, in preparing themselves for this work, have very naturally given themselves to the study as a science, and no doubt in many instances have made this so prominent in their teaching as to overshadow the moral side in not fully discussing the vast evils of intemperance to both body and soul. In our judgment, however, there has been little if any conscious attempt to evade, in any way, the explicit requirements of the law, and the science, together with its hygienic applications, is gaining favor with teachers and pupils.

There should be no indifference to the serious moral import involved in such instruction. To avoid the evils of intemperance requires, of course, the firm exercise of will, which in most cases, when habits are already formed, needs the power of Divine grace to secure a lasting victory; yet it must be plain that a clear knowledge of the evils, as affecting body and soul, especially with the young, can but be of great service in helping them to shun the temptation when in subsequent years the tempter meets them with his specious pleas. Prudent treatment of any vice is not only therapeutic in the way of applying remedies for the disease already in existence, but prophylactic as well in guarding against its threatened attack.

General compliance with the law.—State Superintendent D. J. Waller, jr. (1890): The reports made to this office indicate a very general compliance with the spirit as well as with the letter of the law. The penalty for failure to comply with its provisions has proven to be sufficient to secure obedience on the part of those not specially interested in the subject.

An instance of harmful legislation—Results opposite to what intended.—Superintendent C. F. Foster, of Chester, Delaware Co., (1891): With all respect for the philanthrophic and Christian women who have secured the present scientific temperance law, we can only characterize it, after a thorough test of six years in a strict observance of all its details, as an instance of harmful legislation. We have followed its requirements to the letter. We have used only the authorized text-books.

Every grade, from first primary to high school, is taught physiology and hygiene, "including special reference to the effect of alcoholic drinks, stimulants, and narcotics upon the human system." The result upon the minds of the pupils, and too often upon their personal habits, is the opposite of what was intended. The way in which this effect is produced, for aught we know, may be that illustrated in the oft-repeated lines of Pope:

> "Vice is a monster of so frightful mien,
> As, to be hated, needs but to be seen;
> Yet seen too oft, familiar with her face,
> We first endure, then pity, then embrace."

It is certain that a repetition of any precept, whether in abstract or concrete form, during twelve or thirteen years of a school course, must produce weariness and eventually disgust in the pupil's mind, and that the natural perversity of the human heart will, in not a few cases, assist to produce a revulsion in sentiment and practice. I am ready to affirm that in this community the evils which this legislation aims to check are constantly on the increase in spite of the most thorough temperance instruction in the schools, and that the best results in this line have been reached by a few teachers, who, in a kindly, yet conservative way, have gained the confidence of their pupils, and by the voluntary organization of children in "bands" or "societies," have kept them interested in the various features of moral and social reform. There can be no objection to the requirement by which scientific temperance instruction is made a part of the public-school course within certain limits, but when it becomes like the image set up in the plain of Dura, claiming universal homage, it is well to ask "*cui bono?*"

SOUTH DAKOTA.

Not received the attention which it should.—State Superintendant G. L. Pinkham (1890): The impetus given this matter by national legislation, while we were yet under territorial government, has been preserved by the passage, at the first

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session of the State legislature, of a bill, with stringent provisions, for teaching in our schools the facts concerning the nature and effects of alcoholic drinks and narcotics upon the human system. I am not able to state how universally in our schools the provisions of this law are complied with, but I aprehend that the matter has not received in all places the thorough attention from school officers and teachers which it should. Its provisions are not too strict when we consider the importance of the subject.

After June 1, 1891, teachers are required by this law to be examined with special reference to their knowledge of the nature and effects of alcoholic drinks and narcotics. As the questions heretofore prepared by the state department have quite thoroughly covered this ground, the teachers and schools are presumably in full harmony with the spirit of this law, and the only change will be that of the text-books that do not comply with the provisions of the statute.

Statistics 1890.—Number of pupils, 66,250; number studying physiology and hygiene, 26,732.

VERMONT.

Let the children be taught to form good habits.—State Superintendent Justus Dartt (1886): The startling fact that so large a number of school boys are forming the habit of using tobacco by smoking cigarettes, thus retarding physical development, disordering the nervous system, and weakening their mental power, is a sufficient incentive to all the effort that has been or can be put forth to forearm the children against this evil. Above all things else, let the children be taught to form good habits.

V.—AN INQUIRY INTO THE RESULTS OF TEMPERANCE TEACHING IN MASSACHUSETTS.

REPORT OF GEORGE H. MARTIN, AGENT OF THE STATE BOARD OF EDUCATION.

[The following report of Mr. Martin was taken from the Massachusetts School Report of 1890-91, pp. 312-326.]

Under the law of 1885,[1] which requires physiology and hygiene, with special reference to the effects of stimulants and narcotics, to be taught as a regular branch to all pupils in all schools, there is great diversity of practice. I have made it a subject of special inquiry, and have gathered a large amount of material in the form of written papers. These papers have been furnished by the most advanced classes in the grammar schools. The pupils have been asked to write for me what they could recall concerning the effects of alcohol and tobacco on the human body. They were not required to put their names to the papers, so that they wrote without constraint, usually taking all the time they wanted. To judge of the work most intelligently, one should read all the papers; but in this report I can use only enough to illustrate the classes of work, or special features of the instruction. Read with the allowance which all written papers need, they are useful. They are printed as written.

The cities and towns within my inspection may be roughly grouped in four classes: (1) those in which oral instruction is given during three or four years of school, with the use of text-books during the remainder of the course, from four to six years; (2) those using text-books only in the last one or two years, confining all earlier work to oral instruction; (3) those using no text-books, but having regular oral instruction throughout; (4) those having only oral instruction, of an occasional, desultory sort. The first three classes might each be subdivided into those having regular oral and written examinations, and those having none. For the use of the teachers in giving oral instruction one or more books are usually furnished, from which the teachers gather material for talks, or from which they read.

Of the work of the schools in the fourth class, it is perhaps enough to say that it does not meet the requirements of the law. Physiology is to be taught as

[1] The Massachusetts act of 1885 provides that "physiology and hygiene, which, in both divisions of the subject, shall include special instruction as to the effects of alcoholic drinks, stimulants, and narcotics on the human system, shall be taught as a regular branch of study to all pupils in all schools supported wholly or in part by public money, except special schools maintained solely for instruction in particular branches, such as drawing, mechanics, art, and like studies. All acts or parts of acts relating to the qualifications of teachers in the public schools shall apply to the branch of study prescribed in this act, and all penalties now fixed for neglect to provide instruction in the branches of study now prescribed by law shall apply to this branch of study."

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a "regular branch." This can mean nothing less than it shall have a permanent place in the programme of school exercises. How frequently the periods given to it shall recur, the law does not attempt to prescribe; but that they should recur at stated intervals, and frequent enough for teachers and pupils to consider them essential parts of the school exercises, there can be no doubt.

The word occasional is so elastic that the results attained in schools of this class may vary widely. In some schools few facts have secured a lodgment in the pupils' memory, though there is a decided impression of the harmful character of alcohol; for example

EFFECTS OF ALCOHOL AND TOBACCO.

The effects of alcohol is bad because it injures your health and body and in a little while it will kill you. When you are cold and take alcohol in liquor it will warm you up for a while and in case of sickness the doctors will give it to you in liquor.

THE EFFECTS OF ALCOHOL.

I have heard that the effects of alcohol on the human body is a ruination to the person who uses it It burns the person in side and doen't him any good but does him harm. They say it is good for medicine but I do not know. I think we could get along with out it. If it is good they abuse it by puting it into intoxicating drinks which is very injuriou to the human body.

TOBACCO.

If the persons smoke it will make cancers come on their lips and will make the cancer in the stomach. Tobacco often leads to drinking. Tobacco is sometimes made in filthy places and is not good for persons to use.

In other schools of this class the best pupils are are able to write as intelligently as when more formal work is done:

Alcohol is a stimulant when taken in small quantities, in larger quantities it is a narcotic. Its immediate effect is exhilerating but after working through the system it stupefies the brain and makes the body unfit for use. It destroys many of the small glands of the stomach and alimentary canal and makes those that are left hard and ropy. It makes ulcers on the small intestines. It destroys pepsin which is the fluid that digests the food taken into the stomach, It makes the blood flow much faster than is necessary and consequently wears out the heart much quicker than it naturally would, It makes a man a beast, It in time takes the place of food, and makes the stomach a good pouch for holding alcohol, but useless to digest food. The poison in tobacco is called nicotine, a drop of this fluid will instantly kill a dog. The general effect of tobacco is the same as that of alcohol although it is not so violent, it produces ulcers in the throat.

THE EFFECTS OF ALCOHOL AND TOBACCO ON THE HUMAN BODY.

When a boy begins to smoke young his growth is stunted, his complexion is sallow, his teeth become yellow, and his breath bad. It also works on the brain. It does not effect one right off but by degrees The man who drinks a little at a time does not think he is doing any harm to his body, but he is, His stomach is burning by degrees and finally when he becomes a drunkard he has no stomach at all, (so to speak). It works on his nerves and his muscles, and he finally looses all his power.

The weaker ones have little to say, but contrive to express their feelings:

ALCOHOL AND TOBACCO.

The effect of alcohol on the human system is to produce raw sôres in the intestine. In time it produces a disease of the brain known as delirium tremens. A man who drinks intoxicating liquors is slowly poisoning himself and if he keeps on he will die. Tobacco contains a deadly poison called nicotine. When the young use it, it dwarfs the body more or less.

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ALCOHOL AND TOBACCO.

Alcohol makes any one nervous and irritable. If any one begins to drink, it is very hard to leave off. It irritates the stomach and heart.

In schools where the instruction is all oral, but regular, the pupils write more fluently than in schools of the fourth class. Their knowledge of the subject is apt to be more comprehensive, but it is still general. The effort to be specific is not often successful:

THE EFFECT OF ALCOHOL ON THE HUMAN SYSTEM.

Alcohol is one of the worst enemies of mankind, yet many people, falling into the habit of drinking this disastrous spirit, could not live without it. If they could see the picture of their system before and after using the alcohol they would not care to drink another drop. When it passes down the throat it burns off the skin leaving it bare and burning. It causes the heart to beat many unnecessary times and after the first dose the heart is in danger of giving out so that it needs something to keep it up and therefore the person to whom the heart belongs has to take drink after drink to keep his heart going. This unnecessary work soon wears the heart out. The liver is also effected by alcohol. Before the use of it, the liver is smooth and velvety. After long use of it, the liver is turned to a different color, and there are large pimples growing out on it. These look like nails and the liver is called "Hob nail liver."

THE EFFECT OF ALCHOHOL ON THE SYSTEM.

Alchohol poisons the human system. After a man has been drinking alchohol his brain becomes cloudy and he is unfit for work. Many people think that alchoholic drinks help men to do their work better, but after they get used to drinking alchoholic drinks, it is hard for them to work without it, and they do not do their work so well.

Statements like the following abound in the average papers: "Makes the mind dizzy;" "The skin on the organs cracks out;" "Before alcohol is put into the body, the liver is soft and flat, but after a person drinks it for two or three years, that organ becomes hard and full of holes like a sponge, and instead of being flat, it is round;" "Every drop that is taken rushes to two little cups in the brain." The more illiterate pupils here, as in the other schools, are firmly impressed that alcohol is an evil.

Alcohol, to those who drink it makes great blotches on your face, and makes it red. If you drink much of it, it will make you drunk. Its makes your liver like leather, and is called the hob-nailed liver. It affects your whole body and makes you die sooner. It affects your heart the most.

THE EFFECT OF ALCHOALL ON THE HUMAN SYSTOM.

When aman gets adrinking rum, which contains alchoall, it goes to his brain, and makes him unsenseable. Alchoall will quicken the pults, and the hart will beat faster than usual Alchoall is poision, and will poision the blood.

In some schools the moral and social side of the drink question seems to be made more prominent in the oral instruction than the physiological side. Some of the best papers, from a literary standpoint, are from these schools. Such are the following, which are scarcely better than the average of the whole class:

THE USE OF ALCOHOL.

Alcohol is a spirit of wine. It is very injurious to the system, and sometimes causes paralysis of the nerves, which also leads to blindness. The use of alcohol by grown up people, sets a bad example to the young, who surely can not help from seeing intoxicated men and sometimes women staggering along the street. It seems as if young people might resist the temptation of what they know will be an injury to them, when they see the effects; poverty, cruelty, murder, suicide and many others.

A man who comes home under the influence of alcohol, with his mind dazed, is often cruel to his family, and what might be a happy home is an *un*happy one, on account of the father's habit of drink.

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In many homes wine is on the table daily, and the children see it drank before them, and some are even allowed to taste it.

I think the whole country suffers from it, and it should be put down as it has in some places. Attempts have been made in Boston, but the prohibitionists have not succeeded. Some of the business men say it will hurt business, but I should like to have it tried.

THE USE OF ALCOHOL.

Alcohol is a kind of ardent spirit. It will paralyze the nerves when taken as a drink. Alcohol is generally used to put in drinks, such as rum, ale, and lager.

When once a man begins to drink things in which alcohol is put, it is very hard for him to stop. A man who drinks, almost invariably, is robbing his family of the money which they aught to have and which he is spending for his cravings of liquor.

It is one of the great topics of the day whether or not drinks, which contain alcohol shall be sold, made or imported into this country.

Young men who begin to drink do it because they think it a smart thing They do not look forward to what will become of them when they grow up to be men. They perhaps do not think or know that nations have been ruined by this curse.

Every day this curse is getting a stronger hold on our nation. Every day it is growing larger and larger. Shall we allow this curse to ruin our nation. No! Somehow it must be stopped but how.

THE USE OF ALCOHOL.

The pure alcohol is a liquid of about the color of water. The Bible says "It biteth like a serpent and stingeth like an adder."

It is mixed with wine and sold to people as a beverage. To such people the ordinary food is not strong enough to satisfy their appetites. They sometimes eat garlic with their food.

A liquor saloon is a very poor thing to have in a community. It is generally brilliantly lighted in the evening to attract the young men. They will stay away from home for the sake of being in this gay company. They may loose their position in business if found intoxicated. It is the ruin of a man to take liquor as a beverage.

Drunkenness leads to many evils. When intoxicated murder may be committed, rash acts, stealing, and sometimes suicide.

A large part of the money spent in the Union is for liquor, wines, and tobacco. Good could be done in every way with the money spent for these purposes.

In the effort to have the pupils receive their information in more definite form and retain it, some teachers arrange the leading physiological facts in form and order and require the pupils to memorize the statements. In classes where this practice obtains, the papers are essentially alike:

Alchohol is a drug of very great power It weakens the nervous system and often leads to paralysis. It causes a disease of the liver, stomach and kidneys, and often leads to dyspepsia, which is caused by indigestion. It lessens the mental powers, so, that a child using would not be able to learn or think as quick as he otherwise would. It often dwarfs the body.

It weakens the whole nervous system and often causes paralysis, epilepsy or insanity. When used in small quantities it is a stimulant, when used in large quantities it is a narcotic.

The higher faculties are first paralyzed leaving the victim under his lower and meaner nature.

Alchohol weakens the muscles of the heart causing it to beat more rapidly, distending the blood-vessels, and overcharging them with blood.

Alcohol, irritates, weakens, and inflames the stomach, liver, and kidneys and often causes fatal diseases in these organs.

Alcohol weakens the muscle of the heart causing the blood to flow too rapidly and thus distending the blood-vessels. By use of alcohol the brain is first excited, then paralyzed. The higher faculties are first paralyzed leaving the victim under control of his lower and meaner nature. It weakens and exhausts the nervous system and sometimes causes paralysis, epilepsy and insanity.

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EFFECTS OF TOBACCO ON THE SYSTEM.

Tobacco is very injurious to the young and no child which uses it is ever a good scholar. It dwarfs the body and lessens the mental power when first used by the young it makes them feel sick, stupid and drowsy, and gives them a yellowish or sallow look. It hurts the action of the heart, persons using it are hardly ever if ever healthy. Tobacco is a drug of very great power, a drop oil extracted from it placed on a dogs tongue will kill him nearly as quick as sprucid asic.

EVIL EFFECTS OF TOBACCO.

Tobacco is a drug of very great power a drop of oil exacted from it placed on a dog's tongue would kill him nearly as prusic asid.
Tobacco when used by young is always injurious. It oftens duarfs the body and always lessens the mental powers. No child usuing it is ever as good a scholar as he otherwise would be.
Tobacco also causes diseases of mouth and throat.

Passing to consider the schools where text-books are used for a longer or shorter time, the character of the papers presented seems to depend more on the general character of the school and the ability of the pupil than on the number of years spent in the study of alcohol.
If we select a number of schools in which the subject is studied from text-books one, two, three, or more years, we shall find the best papers presented will cover essentially the same facts in all the schools. On the other hand, the average papers, after one year's use of the book, may be better than other schools will furnish after five or six years' study. For example:

A.—Text-book one year; two lessons a week.

EFFECTS OF ALCOHOL.

Alcohol at first acts as a stimulant, but when the stimulant has spent its force it leaves the body in a very weak condition It paralyzes the nerve centres, and causes a fatty deposit around the heart and enlargement of the liver. When alcohol is first taken into the system it quickens the action of the heart and afterwards leaves it very weak so that it cannot perform its work properly Continued use of alcohol produces delirium tremens which sometimes ends in death. The appetite for alcohol may be inherited In persons who use it the nerves are so weak that they cannot resist the temptation to drink.

B.—Text-book one year; four lessons a week.

EFFECT OF ALCOHOL ON THE HUMAN SYSTEM.

When a person first tastes any alcoholic liquor, as a rule, they do not like it; but they often try it again just to see if they don't like it. Gradually they learn to like it. Some persons drink to such excess that their whole system is saturated with liquor and it would kill them to go without.
Alcohol weakens the muscles and makes them flabby. When alcohol is first taken into the system it exhilarates the person and makes them lively; but it soon produces a stupor. Alcohol weakens the heart, so that it is not able to perform its work thoroughly. It eats out the coats of the stomach, and of course the stomach is not able to perform its work of digesting the food thoroughly, thus causing indigestion. Nothing will quench the thirst of a man who drinks alcohol but alcohol.

C.—Text-book two years; two or three lessons a week, with written examinations.

EFFECT OF ALCOHOL ON THE HUMAN SYSTEM.

Alcohol drys the blood, weakens the mind, deadens the nerves, causes sickness, sores, cancers and in every way weakens and poisons the body. It has a great craving for water and therefore it takes the most necessary thing from our body. It weakens the blood-vessels so much that the blood, which flows with much force when alcohol has been taken into it, burst them, this causing death. The blood often stagnates in the blood-vessels near the skin, causing it to have a red appearance.

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It weakens the mind, causing the victim to stagger. It also puts one in such a way as to murder, steal and to even worse things. The man does know he is doing anything because the alcohol has weakened his mind so much that he does not think.

The liver, stomach, lungs, and intestines are weakened and poisoned more or less.

The teeth have a soiled appearance, and the gums are spungy. The breath also has a disagreeable odor.

The habit of drinking alcoholic drinks often leads to insanity.

D.—Text-book five years; two lessons a week during last two years.

PHYSIOLOGY.

Alcohol in any form, is very injurious to the body. Young children should never use it, because it checks their groath. It weakens the brain, and makes them seem very stupid at times.

People who begin to use it, and think it will do them no harm, find out in after years that it has power over them, and they cannot control their appetite. It also makes them have an uncontrolable temper.

Alcohol hurts the stomach very much. Without realy giving strength, they give a feeling of strength and confidence. Their sensibilities become lively Alcohol often causes paralysis and insanity, and often enlarges the small blood-vessels. People who use alcohol have very impure blood.

E.—Text-book three years; two lessons a week; written examinations.

EFFECTS OF ALCOHOL ON THE SYSTEM.

Alcohol is the fermentation of fruits and grains. The different liquors made from it are cider, beer, wine, whisky, brandy, and gin. Alcohol is a clear colorless fluid and is lighter than water. Alcohol could not be a food for the body because it does not nourish the body. The alcohol makes the person dry and want to drink a good deal after using it. It also takes water from other parts of the body where it is needed. It turns the blood to water, and it does not satisfy the hunger because hunger needs solid food to satisfy that, and it does not help to digest the food. It does not keep the body warm as some persons think it does It flushes the face, deadens the body and makes the face red and bloated. Alcohol poisons the stomach and bowels. When the person first commences to use this for a drink it makes him sick to his stomach, and the food does not agree with them. And after awhile the stomach gets diseased and flamed and the person dies. Alcohol might be looked upon as a medicine and never should be used for any other use. It is a real poison and if persons regarded it so the better their health would be. It is a cause of thousands of peoples death and nervous diseases. And children inherit bad habits, and are likely to be weak minded.

F.—Text-book three years; weekly lessons.

THE EFFECT OF ALCOHOL ON THE HUMAN SYSTEM.

When alcohol is first taken, it goes first to the stomach, where it does its first harm. It begins to absorb the gastric juice, so that there will not be enough to mix the food. Then it is carried into the blood, which it poisens. Then it does a great harm in the brain. It destroys the nerves centered there, and so the person that takes the poisen, does not feel the cold or heat as he ought. The alcohol in the blood, makes the flesh look bloated and discolored. Sometimes persons grow crazy from the effect of strong drink. So, we see what a great harm it does.

G.—Text-book five years; semiannual written examinations.

THE EFFECTS OF ALCOHOL ON THE HUMAN BODY.

Alcohol is a stimulant and narotic. It causes disease of stomach and congests the blood-vessels. It impairs the appetite for food It delays and impairs digestion. It thins or coagulates the blood It collects in the brain and causes death. It affects men of all temperments It causes delirium-tremens if taken into the system frequently

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Alcohol makes you lose your self-control. It draws water from the nerves and injures them It quickens the beating of the heart and wears it out. It hastens circulation. It leads to crime of all sorts. It injures the thought-producing power. It causes paralysis. It causes insanity.

H.—Text-book five or six years; two or three lessons a we

EFFECTS OF ALCOHOL UPON THE BODY.

Alcohol is a poison, which has great effect upon the body. It injures the brain so it cannot think properly, it burns the stomach, so that it cannot digest the food, it makes the heart beat faster, and if it is drank continually it will finally kill a person, it also poisons the blood.

I.—Text-book six years; weekly lessons; class marking; term examinations.

EFFECT OF ALCOHOL ON THE HUMAN SYSTEM.

Alcohol is very injurious to the human system. It effects every part of it. It stops the growth of the bones. It makes unhealthy fat on the muscles so that they cannot work with much force and are not so elastic. It enters the stomach and does great harm there. It separates the pepsin from the gastric juice and makes sores all over the stomach. It gets into the blood and makes it impure, and also injures the blood vessels. In the lungs it injures the thin membrane or lining to the them and makes the breath smell bad. The heart is a muscle so that it injures that in much the same way as other muscles and also makes it work harder.

The nerves and brain are also injured. Alcohol deadens the nerves and often people will do things when intoxicated that they would think very wrong when sober. Alcohol also causes consumption instead of curing it as some people think. If children have drinking parent they often weak and sometimes idiots. Alcohol is used by some people because they think that it will warm them but it does not only for a little while then they are colder than before. It has been found that people can work better without alcohol than with it.

THE EFFECT OF ALCOHOL.

(*a*) The effect of alcohol is that of a narcotic; it destroys character, destroys the vital functions of the body & has the effect of a slow poison.

(*b*) The action of the heart is increased & "fatty heart" is often the result.

(*c*) The lungs are affected by having more work & the influence of bad surroundings.

(*d*) The bones are affected by having their growth stunted by poor blood & the injuring of the pieroistum.

(*e*) The blood as the life fluid is affected by a loss of red corpuscles, the minute bodies which carry oxygen, & from this loss comes a disease known as Aneamia; Of course there is a large increase of fat which is entirely useless.

(*f*) The effect upon the brain in slight does; as a glass or two at a fashionable ball, is to increase or stimulate the action of the cerebrum. In larger doses the nerves are deadened or the person is hateful & finally sleeps it off. In a regular spree Delirum Tremins is often the result.

(*g*) All the senses are deadened.

(*h*) The pepsin in the gastric juice is separated from it, & sinks to the bottom of the *stomach*, stopping digestion till more can be thrown in & digestion completed. The lining is also irrated to the extent of cancers & sores.

(*i*) The liver becomes of an immense size, swollen, or "hob-nailed." Also a bad secretion of bile.

(*j*) An extra growth of the connective tissue is caused in the muscles.

The last two papers are from a school where the instruction has been most thorough and systematic, and continued through the longest period; probably in no town in the State has more time been given to the subject.

These are specimens of the best papers; from them the others shade down to almost zero; for example, in schools where a text-book has been studied for five years many of the pupils can write but two or three lines:

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ALCOHOL AND TOBACCO ON THE SYSTEM.

Alcohol has a bad effect on the system. It makes the head feel thick and heavy and also stupefies.

ALCOHOL.

Alcohol is a stimulant and narcotic, it interfers with digestion, causes congestion of the blood vessels, and if you once take it you will want it all the time. Food is delayed by Alcohol.

EFFECTS OF ALCOHOL.

Alcohol weakens the muscles. Alcohol affects the nerves. Alcohol affects the brain.

TOBACCO.

Tobacco injures the spinal cord. Tobacco injures the brain. Tobacco injures the blood.

In many of the country schools the amount of information retained and ready for use is very small. The poorer scholars, whose deficiency is marked by faulty English, are often stronger in their expressions than the more cultivated pupils:

ALCORHALL.

All liquor contanes alcharhall. It poisions the syliava and the gastrit juice when it mixes withe the food it stops the works and the food layes in the stomacke, which causes it to ache. When the juice mixes with the blood it poisons it. Next the man is sick with blood poison and dies and the people wonder what made him have that.

THE EFFECTS OF ALCOHOL.

Alcohol is another very injurious thing to the body. It is very injurious to the heart especially and there are a great many men that die from the use of alcohol sooner than those that don't. Some men go crazy from the use of alcohol or they are called delireum tremans, and a great many men the have used alcohol have become ministers and their advice to boys or anybody not to use alcoholic drink's.

Alcohol is very bad for the stomach and is good for the head ack and it is a strong smell and It will stop any one from fainting.

THE EFFECT OF ALCOHOL.

It will gradually eat away the flesh. If any one drinks it, it will pickel the inside of the body.

THE EFFECT OF TOBACCO ON THE HUMAN SISTEM.

The effect of tobacco on the sistem it deadens the brain and the user it is said to have a sore heart which in the gets clogded and they die quicker than if they did not use it. it softens the brain.

In schools where the text-book is begun early I have sometimes called for papers from the sixth grade, a class which has used books for two or three years. Here the amount of information retained is usually scanty, and in crude form. The following are the best papers from school I, sixth grade:

EFFECTS OF ALCOHOL.

Alcohol weakens the body and makes the heart beat too fast, it also makes the blood-vessels enlarge and weakens the walls of the blood-vessels.

Alcohol makes a man have a red face because when the blood-vessels enlarge they show out.

When alcohol is taken into the system it makes poor circulation. The brain wants good blood but when alcohol is taken it does not receive it. When alcohol is taken the brain cannot send the messages so well. Livinstone found that in Africa that the men could do better without it and could endure more heat. And in the Artic Regions the explorers can do better without it because when they take alcohol they do not know so much and can do great deal better with

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out. A man said once that he would not have any alcohol used in his factory because they did not work so well, and if any did use it he would discharge them.

Alcohol also makes the muscles weak and fat so that they cannot work so well.

If a person once takes some alcohol he will keep wanting more because his appetite for it is so strong.

ALCOHOL ON THE BODY.

When a man drinks the first glass he cannot stop but wants more. It burns his stomach and fills the blood vessels so full with the watery substance that they cannot bear the strain so sometimes an artery breaks and death occurs instantly.

About one-fifth of all the water that is in the body is in the head around the soft fibers of the brain and the alcohol mixes with it and takes it away from where it is needed. It deadens his nerves so that the messages do not obey and he does not know what he is doing. Many people are in prison for murder or some other wicked thing because they are under the influence of licquer.

A story is told of a great murderer who was about to kill a baby when the little creature looked up in his face and smiled so he did not like to kill it, so he took a glass of brandy and he did not care.

Insurance men will not insure the lives of licquer sellers because they are most always beer drinkers.

Some times when a person is dying the doctor gives him alcohol to make his heart beat faster till he can give him some other medicine and thus sometimes save his life.

From school H, sixth grade, the following are the best:

The effects that alcohol has on the body is that it poison the blood, and hardens the albuem of the brain, just as it hardens the egg as if it was boiled, and it does harden the brain, so that we can not think as we could if we did not drink the alcohol, and it hurts the heart because it makes the heart beat to fast because heart wants to drive it out quick, and this wears the heart out, and so we know alcohol does harm to the body.

Alcohol poisons the blood and hurts the brain so it is not able to think well, It poisons the heart and lungs it makes people stuid and they don't don't walk straight. And it makes them have diseases

Sometimes it makes the heart stop beating and then they die. Alcohol makes them so stuid that they do not know what they are doing part of the time.

Alcohol makes bad blood and bad blood makes poor bones. Alcohol makes them unhealthy and so shortens their lifes. When people first begin to drink alcohol it seems bitter, but they keep on and so get used to it.

I have culled the following statements of the effects of alcohol on the stomach and brain from a large number of papers. Most of them are from the better class of papers, as the poorer scholars make few specific statements: "It separates the pepsin from the gastric juice, and makes sores all over the stomach;" "Destroys the fine membrane that lines it;" "Inflames the lining of the stomach;" Inflames the sides, and changes the pinkish lining to a bright red;" "By taking the gastric juice from the stomach, so the stomach has no juice to aid in digesting the food;" "Inflames the membrane, and causes sores to come inside;" "It uses up all the tissues lining around the stomach, and it uses all the saliva in the body so that we cannot digest the food;" "Will make the lining of the stomach fat;" "The pepsin in the gastric juice is separated from it, and sinks to the bottom of the stomach;" "Takes the gastric juice of the lining and turns the lining into fat;" "Irritates the lining, and takes the water from the gastric juice;" "The alcohol in the system lies at the bottom of it until the glands can pour in enough gastric juice to dissolve the alcohol;" "Burns the stomach so as to raise little blisters on the inside of it;" "Eats the lining;" "Burns off the coating;" "Makes cancers come in the system;" "Makes the lining of the stomach tough;" "His stomach becomes black, and covered with cancers. The moderate drinker's stomach is not quite so black;" "Hardens the mucuous membrane, so that the digestive juice can not get through;" "Makes the gastric juice flow fast, until it becomes so weak it can not perform its part;" "Causes the stomach to be dry and hard;" "It draws the pores of the stomach

so tight that the first coating on the stomach is so hard that it can not perspire;" "The stomach becomes coated with a sort of crust, and disease sets in;" "Hinders the action, and makes it look like raw beef;" "Makes great sores in the stomach, because alcohol burns the stomach;" "Gastric juice becomes thick and ropy;" "The blood oozes out from the flesh into the stomach;" "Eats the stomach until, after a time, a man has no stomach at all, so to speak;" "It hurts the brain by injuring the nerves, and often the nerves break, and people have apoplexy;" "It causes more blood to go to the brain;" "When alcohol is taken, the brain can not send the messages so well;" "About one-fifth of all the water in the body is in the head around the soft fibers of the brain, and the alcohol mixes with it and takes it away from where it is needed;" "About one-fifth of the blood is in the brain, and around the soft gray matter, and among the white fibers are tiny blood vessels, and the blood vessels are injured from the drinking of alcohol, and then the blood sometimes becomes stagnant, and headaches often follow after a glass of liquor."

I have endeavored to show as clearly as possible in a limited space the present condition of the physiological work of the schools. To show the work completely would necessitate printing all the papers. After a careful study of these papers, I am lead to the following conclusions. 1. The phrase, "scientific temperance instruction," sometimes applied to this work, is a misnomer. There is, and in the nature of things can be, no such instruction. The two essential elements of scientific study—observation and inference—are necessarily wanting; neither the pupil nor the teacher can have first-hand information; 2. That the outcome in accurate knowledge, resulting from much of the work done, is meager and out of proportion to the time spent upon it; 3. That many false impressions are left in the minds of the students; 4. That physiological details are not suited to young children; 5. That, however defective the instruction may be, the sentiment of the schools is sound—the conviction that alcohol and tobacco are bad things to use seems universal; 6. That the strength of this sentiment does not depend upon the amount of information acquired; 7. That, where exaggerated notions of the effects of stimulants have been acquired, there is danger of a reaction of sentiment in the light of after knowledge. From these conclusions I venture the following suggestions: 1. That committees and superintendents give more careful attention to work in this department, prescribing definitely its limits, and requiring the prescribed work to be done as well as work in other subjects, using the same means for judging of its progress and results; 2. That teachers who are called upon to give oral instruction prepare themselves with great care for the exercise, and see that their statements are true, and by frequent tests, oral and written, ascertain that their teaching is intelligently comprehended by all the pupils; 3. That, when no text-book is used in any grade, the teachers prepare for the highest classes a summary of the effects of stimulants and narcotics upon the different systems of the body, aiming at clearness of statement, and avoiding exaggeration; 4. That the use of text-books be limited to the older pupils; 5. That so much of explanation accompany the use of the book as may be necessary to guard against error and insure exact knowledge; 6. That, as far as possible, technicalities be avoided; 7. That the pupils have frequent opportunities to express their knowledge orally and in writing; 8. That throughout the course the moral and social effects of the use of intoxicants be made prominent, and abstinence be inculcated from higher ends than such as concern only the body.

Respectfully submitted.

GEO. H. MARTIN.

VI.—OBJECTIONS TO SCIENTIFIC TEMPERANCE INSTRUCTION STATED.

SCIENCE IN HARNESS.

[*From the Popular Science Monthly, November, 1887.*]

No journal has upheld more steadily than the Popular Science Monthly the principle that, as far as they are established, the truths of science shall be applied to useful purposes and through popular education be made as widely available as possible for the general guidance of life. And yet we can not look with favor upon what many persons doubtless regard as a very signal and happy example of the utilization of scientific conclusions. We mean the authoritative

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and dogmatic teaching as to the effects of alcohol now provided for by the school laws of many States. It is only right, therefore, that we should assign our reasons for holding that this is not a case of the legitimate application of scientific truths to practical life.

In the first place, it is an abuse of power on the part of the majority. In the "temperance" controversy as a distinct social issue we have no wish to interfere; but we can not ignore the fact that there is such a controversy, nor can we consent to believe, with the advocates of prohibitory legislation, that their opponents are necessarily persons devoid of all high motives and hardly to be distinguished from the criminal population. But if a minority in the State is to be respected so long as it is law-abiding, its opinions are also to be respected; and to seize hold of the school machinery of the State to inculcate opinions that are not accepted by the minority, and that tend to set the minority in a very unfavorable light, is not right nor just. If every triumphant party were to seize the public schools for the inculcation of doctrines favorable to its own party interests, there would soon be an end of our public-school system. It would always be easy to invoke the name of science. If it were desired to rear a race of protectionists, it would only be necessary to claim that you were teaching the truths of political economy. The proper text-books would be prepared, and teachers, on pain of dismissal, would have to enunciate the doctrines of Henry C. Carey and Horace Greeley; and so in the days of slavery, the science of ethnology might have been invoked either on the side of abolition or in defense of the slave system, according to the leaning of the majority. At this moment we have the president of a New England college recommending the majority in the several States to use their power to enforce the teaching of certain specific views of New Testament history which he is pleased to declare all competent critics have accepted.

"But," say the advocates of the teaching to which we refer, "we only wish to inculcate the real results of scientific research in regard to alcohol." To which we rejoin that, in a community like this, it is too soon to inculcate the truth, supposing you have it, if the issue is still practically open, and if large numbers of your fellow-citizens are not persuaded that what you call the truth is the truth. Minorities have their rights even when they are in the wrong, and to use a school system which the minority support to teach opinions which the latter do not believe to be true is unfair.

But there is another view of the matter. Are the advocates of such instruction prepared to have it communicated in a thoroughly nonpartisan spirit? Are they prepared to have the whole truth taught, or do they want only that part of the truth which is favorable to the specific end they have in view? Are they prepared, for example, to give any fair representation to the views of those who consider that alcohol has its important uses, dietetic and social? A few years ago the Contemporary Review opened its columns to a discussion of the alcohol question; and we are safe in saying that there was a preponderance of opinion among the many eminent men who joined in the discussion in favor of a moderate use of alcoholic beverages. In the August number of the North American Review, a well-known physician of this city enters a plea against the indiscriminate condemnation of narcotics and stimulants. Is all this opinion to go unrepresented when the alcohol question is introduced into the schools? Of course it must, or the specific object of the teaching would be ruined. We say, therefore, that this is not teaching science; it is harnessing science to the "temperance" cart, and driving her under instruction from "temperance" headquarters.

THE RESULT OF SCIENTIFIC TEMPERANCE INSTRUCTION.

[From Science, July 29, 1887.]

Will the reader please cast his eye upon the following questions: 1. How can it be proved that nicotine is a poison? 2. Why are cigarettes especially harmful? 3. Is alcohol a food? 4. What is the effect of disuse upon a muscle? 5. Under what names is opium sold? 6. Under what name is alcohol drunk? 7. What is the difference between a food and a poison? 8. Is anything gained by changing from one narcotic to another? 9. What is the effect of beer as a drink? 10. How does cheerfulness help the muscles? These are the questions given as a test in physiology in the public schools of a prominent Eastern city. They are not addressed to young men about to leave school. No; they are asked of little boys and girls of from 8 to 10 years of age. This is the examination paper at the end of the first year's elementary instruction in physiology. Of ten questions, eight relate to drinking and smoking; the physiology is a mere side issue. These children, who ought to have about as much knowledge of such matters as they should of the methods in vogue at the stock exchange, are

actually forced to learn by rote the details of human vice; and that; too, under the name of "physiology," the only science which they learn. Unconsciousness, naïveté, is the symbol of childhood. The fact that physiology, even if well taught, tends to destroy this trait is the chief objection to its early study. Instruction such as the above implies crushes the most valuable trait in the child, directs curiosity to what is morbid, and forces into precocious development all its dangerous elements. Not enough that the newspaper and the dime novel proclaim in glaring colors the story of crime and sin; some notion of the perversity of human nature must be mixed with the food of babes. That the result of this teaching is to excite in the children a morbid curiosity to experiment for themselves in such matters; or (with the boys) to regard the whole thing as a lesson in "goody-goodiness," to which they forthwith decide to show themselves superior; or to regard their father who takes his glass of wine at dinner as an incipient criminal—this could easily have been foreseen and goes without saying. If there is one method better than all others to produce a race of drunkards, this has good claims to that distinction. If there is a degree of wrong in such superlatively perverse methods, then it is still worse that the fair name of science should be outraged in this cause. Not only that this kind of teaching necessarily depends upon catechism methods (that the answer to the second question, for example, is to read that the especial perniciousness of cigarettes is due to the fact that they are usually made of decayed cigar stumps), but that the entire idea of science thus implanted is as wrong as it well can be. Better far revert to the old days when there was no science on the curriculum than have science thus taught. The crowning educational virtue of science is that it leads to the use of scientific methods of teaching; this usurper chokes up all possibility of an interest in the scientific. The temperance question is doubtless one of the most important with which our age has to deal; sufficiently important, perhaps, to make some consideration of it in the public schools a legitimate proceeding, but it must be done at the right time and in the proper way. Nothing can excuse the conversion of a text-book on physiology into a "temperance" tract; nothing can excuse the sacrilege of presenting this story of disgusting vice under the name of "science."

TEMPERANCE INSTRUCTION IN SCHOOLS.

[*From the Medical Record, September 24, 1887.*]

Probably no class of men in the community are better fitted to give a calm, unprejudiced opinion on the alcohol question than physicians. In their capacity of public sanitary guardians, they feel an interest in all practical measures designed to limit the deleterious effects of the use of liquors upon the human systems. The latest effort in this direction is the introduction into the public schools of several States of so-called "temperance" text-books and other paraphernalia of teaching. Some communities have already experienced the first fruits of this new system of instruction. These results are somewhat curious. It is found that the incidental facts designed only to lead up to the one great moral are more prominent in the pupils' minds than the moral itself. The various charts which portray stomachs, livers, and other viscera diseased from alcohol are regarded much in the light of picture-books on a large scale. They produce no more impression on a child's mind than the sight of a tattooed man, or some "freak" of a dime museum.

It is right that the question of temperance should be brought down to the scope of a child's ideas; right from a medical standpoint as well as from a moral one. But it is hardly the judicious course to teach him to regard alcohol as a deadly poison under every circumstance. He will be disillusioned as he grows older, and will look back to his text-book teaching as a mass of overstated facts. The trouble with many of the text-books on temperance used in schools is that they are not physiologically correct. They are written by persons with more zeal than accurate knowledge, and consequently we have sometimes ludicrous statements from pupils. The description of the distillation of alcohol strikes the child as a very interesting thing, and so the fact designed to be taught—its pernicious effects—fails to make a lasting impression.

We think that a better state of things could be brought about if physicians could be led to take a more active management in the public schools. Ministers, lawyers, business men, and professional politicians are always represented upon school boards, but rarely physicians. They are the very ones who should be fully represented. They can, by their advice, better than any other class, conduce to bring up a class of pupils who shall have sound minds in sound bodies. They can prevent the introduction of text-books on temperance or any other topic having a reference to physical matters which are not written with a due

regard for truth and for the receptivity of the minds which are to grasp it. It is coming more and more to be realized that a physician's duty to the community oversteps the sphere of mere sanitary matters and lays hold upon social factors as well. Much of the teaching in schools nowadays is one-sided, because the mind is regarded as something apart from the body and taught accordingly. No one so well appreciates the relation of one to the other as the physician.

HOW WE TEACH INTEMPERANCE.

[*From the Popular Educator, December, 1891.*]

At the Norfolk County teachers' convention, recently held in Boston, a paper was read on the teaching of physiological temperance (or intemperance) in the public schools; and, a little more than a week after, the same subject was presented for our consideration at a teachers' meeting in Hyde Park.

At the former meeting it was very noticeable in the discussion that followed the reading of the paper that those who objected to this scientific teaching, taking the moral side instead, met with greater favor from the audience as a body, judging from the heartiness of the applause, than the paper itself. Possibly, if those gentlemen who advocated the strengthening of the moral nature as the best preventive of intemperance had explained their position more fully, this article would not have been written.

There is, as I believe, a radical error at the basis of this scientific teaching of intemperance, or its causes, to little children. Let me illustrate.

On our way home from the convention we were discussing this subject, and one of our party related the following incident which had come under her notice:

A teacher, who was an enthusiast on this subject, had taken the fruit into the schoolroom and taught the children the process by which the pure juices of the grape and apple were changed into alcohol, and its effect upon the body.

A short time after, one of the boys who had been instructed by her remarked to some one that he had learned the taste of all the liquors in his father's store (he was a saloon keeper), and could readily distinguish one from the other.

How much fear of the effects of alcohol upon his body do you suppose had been created in this boy's mind by this teaching? Instead of this, it would seem there had been aroused in him a curiosity to know more of the things about which he had been taught.

How many of these boys, think you, went home, took their grapes and apples, and made their own wine and cider?

All might not do this, of course, but, judging human nature as it appears, and especially child nature, there seems to be a strong desire to do that which is forbidden.

I know the thought has been, and still prevails, that to avoid evil we must know something about it.

What is our practice in educational matters?

Formerly teachers used to put mistakes upon the blackboard to correct, but now the best teachers claim that children should see only the perfect form of word or letter.

We teach children to be pure in thought, word, and deed, but would never think of specifying the evils to be avoided.

No wise parent or teacher would ever say to a child, "You must not read that book. It contains that which will poison your mind and give you wrong views of life."

Nevertheless, I did hear of a teacher not long ago who advised her girls not to read a certain book which she named, and immediately they sought and obtained the book, of which they had not known before, and read it, although warned against it.

No doubt all who read this can recall many instances of like character.

> Vice is a monster of such frightful mien,
> That to be hated, needs but to be seen;
> But seen too oft, familiar with her face,
> We first endure, then pity, then embrace.

As the world is to-day, the children can not but see that which we call evil all about them; but if they have been taught to love the good, the evil will be hated, or perhaps not recognized by them; while, if we continually keep it before their minds, even though we teach them to avoid it, we make it a familiar object of thought which can not but produce bad results.

"As a man thinketh in his heart, so is he."

"Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, what-

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soever things are of good report; if there be any virtue, and if there be any praise, think on these things."

We all know what great imitators children are, and that with them example goes further than precept. How, then, can we teach them the bad effects of alcohol and tobacco so they will feel it and never touch them when fathers and brothers and men who hold high places in the community and are respected by everyone are slaves to one or both of these habits? We must find some other means of te.ching them the truth so they also shall not be led into this captivity to the senses, than that recommended at the convention.

Teach temperance, not intemperance; health, not disease; truth, not error; purity, not impurity; goodness, not badness; teach the positive, not the negative.

A TEACHER.

"EFFECTS OF ALCOHOL."

[*From the Journal of Education (Boston), December 31, 1891.*]

May I again call attention of the importance of strictly adhering to truth in teaching concerning the effects of all drugs upon the body. On page 359 of the Journal we are told, "Whatever effect is produced upon the albumen of the egg by contact with the alcohol the same thing must happen when alcohol is mixed with food in the stomach."

This is incorrect: 1. Because blood albumen is not egg albumen. 2. Because the blood albumen is greatly diluted, while the egg albumen is concentrated. 3. Because in one case the alcohol used is concentrated, in the other greatly diluted. 4. The experiment in the test tube is performed away from the "life forces," while in the body "life forces" modify chemical forces. In a word, a laboratory experiment must not be taken to explain literally what occurs in the body. The boy, taking a drink of beer, finds he is not killed by it, and soon comes to reject all that he has been taught in reference to the effects of stimulants. Harm is done by our inaccuracy.

G. G. GROFF, M. D.,
President State Board of Health, Pennsylvania.

CHILDREN CAN BE TAUGHT TO THINK ABOUT BETTER THINGS.

An effort has recently been made to fight intemperance by teaching, in connection with the subject of physiology, the effects of alcohol and narcotics on the system. It is an open question whether the results are all that were anticipated. It seems that in many places the craze after cigarettes and old cigar stumps is worse than ever before, notwithstanding the fact that the schools are giving instruction along this line. Why is this? It is quite possible that many teachers use both time and text book in such a way as to injure the cause of temperance. To spend a portion of each recitation in talking about rum and tobacco is, to say the least, unwise on the part of the teacher. Instead of this let him class rum, tobacco, and opium with other things that should be let alone, and let him speak of them only as occasion requires. The better way will be to see that none of these things are found on or about the school grounds. Milton has not increased our hatred of Satan by making him a hero in Paradise Lost. Why should rum and tobacco be the "heroes" in so many school rooms? Children can be taught to think about better things. (J. D. Meese, Southwest State Normal School, Pennsylvania.)

VII. ANSWERS TO SOME FALSE NOTIONS.

BY MRS. MARY H. HUNT.

The following misconceptions have arisen in certain quarters concerning the teaching of physiological or scientific temperance:

First, that "temperance is a moral not a scientific question; therefore, if taught at all in the schools it should be from the moral standpoint only." "The strengthening of the moral nature is the best preventive of intemperance." "You should strengthen the will to prevent the pupil from drinking," these objectors say.

Second, "If you teach the pupil the evil character and effects of alcohol, tobacco, etc., the law of perversity in his nature will make him want to try those things for himself," etc.

Third, "As long as the fathers smoke and drink it is not only of no use to teach the children not to, but such teaching is disrespectful to parents."

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In answer to the first objection that "temperance is a moral, not a scientific question," etc., let us inquire:

(1) Is it not true that a moral question is one that considers what is right or wrong in action on the part of beings capable of choice?

(2) Are there not certain facts which are the reasons for an action or course of action being right or wrong?

(3) If these facts, the reasons for the right or wrong, are duly arranged in the case of each obligation, do they not form the science of that special obligation? Webster says that "Science is knowledge duly arranged."

(4) Can a person be taught the principles of morality in any case, or to intelligently choose the right without being taught the facts which show why one course or set of acts is right and another wrong; are not these facts the science of the case?

To illustrate: Moral obligations may be classified under three general heads:

(1) Duties to our Maker.

(2) Duties to our fellowmen.

(3) Duties to ourselves.

The facts that are the reasons for our duties to our Creator are set forth in the science of theology.

Those in the case of our duties to our fellowmen are classed as the science of sociology.

The facts that prove our moral obligations to ourselves in the case of alcoholic drinks and other narcotics are very properly termed the science of temperance; and here, as in the case of other duties, no person can fully comprehend the extent or scope of that obligation without knowing the facts.

The answer to the question, "What is the nature and effects of these substances," is the facts in this case, on which the whole temperance question rests.

There is no such thing as moral question without a basis of fact that is the science of the question. These are not the days of dogmatic morality. Modern morality teaches the reasons for the right, shows why, and thus "strengthens the moral nature."

The objector says, "Strengthen the will to resist temptation." How do we strengthen the will? The will is the faculty in us that acts on choice, and our choices are more or less influenced by our knowledge or ignorance of the facts in the case. How would you strengthen the will of a boy against the temptation to row across the Niagara River a little way above the falls—by telling him he must not, it would be wrong, or by explaining to his reason the perils that inhere in that fatal current? How would I strengthen a boy's will against intemperance? I would try to give him intelligent reasons on which his will should act. Just as I would teach him the character of the Niagara Rapids I would teach him the nature of those other, the alcoholic rapids, that lead to a worse, a more hopeless plunge into utter darkness. While I would never exaggerate, I would search for the truth on this topic as for "hid treasures," and then teach it, abating not "one jot or tittle," leaving the consequences with Him who said "I am the Truth." He has so made the human mind that it is moved by truth that warns as well as promises. I would teach the boy before appetite is formed the dangerous and deceptive character of alcoholic drinks and other narcotics, especially that proven fact that a little alcohol in any liquor has the power to create an imperious, uncontrollable, and destructive appetite for more, and therefore its use in any quantity is never safe. I would show him that there is a scientific connection between the first glass and the drunkards' fate. I would not preach at the boy nor weary him with repeated homily, but I would lead him, through the study of the laws of his own being, to see and understand for himself that the inestimable blessing and happiness of a strong, healthy, useful life are the result of obedience to laws that are written in our living tissues, and that the penalty of disobedience inheres in the law itself. I would strip the wine cup, and the whole brood of strong drinks, the pipe, the cigar, and the cigarette of the glamor with which ignorance and tradition have decked them, and help the boy to see them and their consequences as labeled by modern science—narcotic poisons.

In answer to the second objection, that teaching the evil character of alcoholic drinks will make the pupil want to try them for himself, we reply: If we tell the boy the perils of the rapids in the smooth, safe-looking stream above the falls, will he immediately wish to embark thereon? Is it a rule that teaching the consequences of evil is only furnishing a motive for immediately plunging into the evil? If so, there must be something radically wrong in the most authoritative of all teaching, for all through the Bible the blessings of right doing are coupled

with vivid descriptions of the consequences of following the wrong. Gerizim and Ebal stand together. I am sure the great body of teachers in our land will agree that it will be safe for us to follow in method the great Teacher. He made the human mind, and He knows the laws of its development far better than we ever can, after all our study.

We teach the need of pure air and good ventilation by showing its importance and relation to health, and how to get it, and the consequences of its absence. If you teach the need of oxygen by showing the consequences of breathing vitiated air, are you thereby teaching imperfect ventilation? Such a claim would be absurd. And yet a recent writer refers to teaching the evil nature and effects of alcoholic drinks, etc., as "teaching intemperance." Then the vivid descriptions of intemperance in the "woes" the Bible pronounces upon drunkards is "teaching intemperance." These objectors certainly need a new and expunged version of the greatest of all manuals of instruction.

Experience must, after all, decide, and happily we are not without precedent. Wherever in the thirty-five States of our country the spirit and letter of the law requiring this study are obeyed, and well-graded text-books on this topic containing the truths the law requires taught are used, with the same wise and thorough methods of teaching as in the case of other branches, pupils thus taught have not consequently rushed headlong to the saloons. On the contrary, an intelligent aversion to strong drinks and other narcotics is manifest; fewer cigarettes are smoked, and pupils are more careful to obey other laws of hygiene.

Giving an occasional temperance exhortation in the schoolroom may take less time and study on the part of the teacher, but, compared with the results of carefully prepared lessons that guide the pupil in finding and intelligently understanding the reasons for total abstinence from alcohol, tobacco, and other narcotics, and for obedience to other laws of health, the mere exhortation or so-called moral homily falls immeasurably short.

The prophet said, "My people are destroyed for lack of knowledge," not for lack of exhortation. To a right-minded child or youth the most impressive of all moral lessons is the one that convinces his understanding and is thereby lodged in his reason. That all children and youth are not right-minded towards alcohol and tobacco is evidence of the deep wound these substances have made upon our humanity through inheritance upon children and "children's children." That some of these, heavily weighted with the sins of the fathers, will go wrong anyway, does not prove that faithful instruction is useless in all other cases.

To the third objection we would put the question: Shall we make no attempt to teach the children better because the fathers drink and smoke? Because some parents murder the Queen's English, we do not therefore think it useless or disrespectful to their parents to teach the children correct speech, and as a consequence the generations rise in the scale of better utterance.

The difficulties are appreciated of teachers who were commanded to teach this topic and given nothing to do it with but the imperfect, badly graded books first put upon the market. But a better day has dawned. Well-graded manuals of instruction, that contain these truths adapted to all classes, are published in great abundance and variety.

Truth is the lever of Archimedes that moves the world. The truth concerning the evil nature of alcoholic drinks and other narcotics is the lever destined to overthrow their use. To the teacher has come the opportunity to scatter that truth. Opportunity is God's command.

VIII.—QUESTIONS ON PHYSIOLOGY AND HYGIENE, AND THE NATURE AND EFFECTS OF ALCOHOLIC DRINKS AND OTHER NARCOTICS.

Published by the scientific temperance department of the Woman's Christian Temperance Union for use in the preparation of essays, examination papers, etc., for the World's Columbian Exposition, Chicago, 1893.

FOR PRIMARY GRADES.

In this subject, as in other branches which extend through several years of school life, a few of the simple elements of each topic are taught, where the subject is properly pursued, in the lowest grade, to be reviewed, with additions from year to year, until an advanced treatment of the whole subject is completed in the high school.

The work of the first year, therefore, properly consists of oral lessons on parts of the body, sight, hearing, taste, smell, touch, cleanliness, and very simple les-

sons on the harm that comes from the use of tobacco and the common alcoholic drinks.

Second year pupils review these topics with additional matter and add lessons on care of the bones, the hygiene of eating and drinking, breathing, etc. The special points brought out in these lessons will be written out by the children at the close of the lesson, and from these written exercises selections may be made and sent on to the exhibit with photographs of class, etc., as above.

Third year pupils, reviewing the ground already covered, learn more on each topic, and add a few simple facts about muscles, nerves, the organs of digestion, circulation, respiration, etc.; the best of their written exercises may also be selected.

In response to request, the questions given below are suggested by the department of scientific temperance instruction.

QUESTIONS ON THE SENSES FOR FOURTH YEAR PUPILS.

[NOTE.—Other topics studied during the fourth year are, food, alcoholic drinks and other narcotics, digestion, circulation, respiration, the skin, bones, muscles, and nervous system, the hygiene of each being chiefly developed. As it is manifestly impossible in the time allowed for preparing papers for this exhibit to cover all the topics studied in any one grade, a selection has been made of one or more for each grade, with questions covering salient points.]

2. How may the eyes be injured? 3. What is a good thing to do when specks get in your eye? 4. What is the outside part of the ear for? 5. Where is the hearing part? 6. How does the brain know about sounds?

1. Why can you feel better with the ends of your fingers than with the back of your hand?

1. What tells your brain that sugar is sweet when it is dissolving in your mouth?

1. How does the brain find out about odors? 2. Upon what does the right action of all our senses depend?

1. What do alcohol and tobacco do to the senses, as of sight, taste, etc.? 2. How will our comfort and pleasure be affected if we blunt or injure our senses with alcoholic drinks or tobacco?

QUESTIONS ON THE ORIGIN AND NATURE OF ALCOHOLIC DRINKS, FOR FIFTH YEAR PUPILS.

[NOTE.—According to the plan of grading this study, now in most successful operation, only a part of the topics included in the whole subject, as food, alcoholic drinks, digestion, circulation, and respiration, are taken up during the fifth year; the remainder, bones, muscles, skin, nervous system, and senses, being left for the sixth year. But the work, though more exhaustive than that in the fourth year, still leaves much that the pupil is not yet prepared to comprehend. The same plan is again pursued for the seventh and eighth years, the seventh year taking up the same topics as the fifth, *i. e.*, food, alcoholic drinks, digestion, circulation, respiration, but with a more thorough and comprehensive treatment; the eighth taking the same topics as the sixth-year grades, *i. e.*, bones, muscles, skin, nervous system, and senses, with more comprehensive treatment. The topics covered by the questions are selected in accordance with this plan.]

1. When the juice pressed from apples, grapes, or other fruits is left in a moderately warm air what change soon takes place in it? 2. What causes this change? 3. Where are the ferments before the apples are ground? 4. How do they get into the juice and what do they do there? 5. What is alcohol and how does it differ from water? 6. What is vinous fermentation? 7. What does fermentation always change? 8. How is this law illustrated when cider changes to vinegar? 9. Why are wine, cider, and beer dangerous drinks? 10. Show how the law of fermentation applies to beer-making. 11. How does beer-drinking give a false appearance of health? 12. How do the results of fermentation differ in bread-making from those in beer-making? 13. Why is there no alcohol in well-baked bread? 14. What is meant by distilled liquors? 15. Mention some of the more common distilled liquors and tell why they are destructive to health and character. 16. What is the alcoholic appetite and how does it differ from a natural appetite? 17. Why should not alcoholic liquors be used as a flavoring for food?

QUESTIONS ON DIGESTION AND MUSCLES FOR SIXTH-YEAR PUPILS.

[The teacher may choose either subject to be written upon if both are considered too long.]

DIGESTION.

1. Explain how food is made ready to mix with the blood and what is meant by digestion. 2. Describe the organs of digestion and tell what they do. 3.

Tell what you can about the liver. 4. What can you tell of Alexis St. Martin? 5. Tell how the nutritious part of food is taken into the blood. 6. What general rules should guide us as to what we should eat? 7. Explain in a general way how we should eat, how much, and the importance of proper cooking. 8. What care should be taken of the teeth? 9. What is the effect of alcohol on digestion and how does it affect the liver? 10. What is the effect of tobacco on digestion?

MUSCLES.

1. What are muscles, voluntary and involuntary, and what purpose do they serve? 2. What are tendons and their uses? 3. Why do we need exercise? 4. What are the advantages of walking as an exercise? Of light gymnastics? 5. What is the effect of alcoholic drinks on the muscles? 6. What is the effect of alcoholic drinks on the strength? 7. How do alcoholic drinks injure a workman's power of doing fine work? 8. What can you say of the effect of tobacco on the muscles?

QUESTIONS ON THE CIRCULATION AND RESPIRATION FOR PUPILS OF THE SEVENTH-YEAR GRADE.

[The teacher may choose between these subjects the one to be written upon if both are too long.]

CIRCULATION.

I. 1. Describe the blood and its uses. 2. Describe the different kinds of blood vessels, their uses, and the pulse. 3. Describe the heart. 4. Starting in the aorta follow the blood in its course through the blood vessels until it has returned to the heart. 5. Follow the course of the blood through the heart and describe the action of each part. 6. How is the action of the heart regulated? 7. How does the heart gets its rest? 8. What are some of the avoidable causes of palpitation and other heart troubles? 9. What is a smoker's heart?

II. 1. How is the circulation regulated? 2. What effect has bodily inactivity on the circulation? 3. Why is outdoor exercise necessary to healthful circulation?

III. 1. What effect have alcoholic drinks on the blood? On the beating of the heart? 2. How does alcohol deprive the heart of a portion of its rest? 3. What effect may alcohol have on the structure of the heart? 4. Explain the cause of the flushed face that follows taking alcoholic liquors? 5. What other parts besides the face are also flushed? 6. How does alcohol affect the blood vessels? 7. How do alcoholic drinks interfere with the proper distribution of the blood?

RESPIRATION.

I. 1. What bodily need is more pressing than the need of food and drink? 2. How does expired air compare with inspired air in its composition?

II. 1. Describe the organs of respiration and their use. 2. What reason for breathing through the nose rather than through the mouth? 3. Trace the blood-vessels from the heart to the lungs and back.

III. 1. What effect has purity of air on the blood? 2. What is the work of the corpuscles?

IV. 1. What makes air impure, and how does nature preserve the purity of the outdoor air? 2. Why is it so difficult to secure pure air for breathing indoors? 3. What is a good test of the character of the air of a room? 4. Tell what you know about ventilation and how it may be secured.

V. 1. What effect have alcoholic liquors on the blood vessels of the lungs? 2. How does alcohol affect the substance of the lungs? 3. What disease of the lungs is caused by alcohol? 4. What effect has tobacco on the throat and nose?

QUESTIONS ON THE NERVOUS SYSTEM FOR EIGHTH-YEAR PUPILS OR FIRST YEAR BELOW THE HIGH SCHOOL.

I. 1. Describe the nerves and the brain and tell what you can of their various uses. 2. Where is the spinal cord situated, what is its appearance, and over what movements does it preside? 3. Why are sensation and motion lost below an injury of the spinal cord? 4. What is the condition of a person whose nerves are incapable of action? 5. What are some of the avoidable causes of disease of the nervous system? 6. How much time should be spent in sleep? 7. Name two safeguards of the nervous system. 8. What is the effect of excessive excitement?

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II. 1. How does alcohol reach and affect the nerve centers? 2. Show the fallacy of the supposition that alcoholic drinks aid brain work. 3. Show how alcohol through its action on the brain affects the judgment, the will, the character. 4. What change may alcohol make in the structure of the brain? 5. What inheritance may a drinking or tobacco-using parent leave his children? 6. What effect is tobacco likely to have on the brain and nerves of a boy who uses it?

QUESTIONS SUGGESTED FOR THE USE OF HIGH-SCHOOL PUPILS IN PREPARING EXAMINATION PAPERS ON THE SUBJECT OF PHYSIOLOGY AND HYGIENE, INCLUDING THE NATURE AND EFFECTS OF ALCOHOLIC DRINKS AND OTHER NARCOTICS, FOR THE WORLD'S COLUMBIAN EXPOSITION.

I. 1. Describe the cell as found in the human body; a tissue; an organ; a system.

II. 1. Why do we need food? Discuss kinds, sources, and proper preparation of food.

III. 1. What are healthful drinks? 2. What change takes place when the juices of fruits are pressed out and allowed to ferment? Tell what you know about the causes of this change. 3. What is present in the liquid after it has fermented that was not there before and how did it get there? 4. Show the fallacy of supposing that beer, wine, and cider are good because made from healthful grains, grapes, or apples. 5. What characteristic of alcohol makes any liquid containing it a dangerous drink? 6. Describe the alcoholic appetite and its causes.

IV. 1. Describe the organs of digestion, and the office of each, and tell what harm alcoholic liquors and tobacco do the same.

V. 1. Describe the blood, the organs of circulation, and the function of each. 2. The need of pure blood, showing causes that make the blood impure. 3. What is the immediate effect of alcohol upon the blood vessels and why? 4. Upon the heart and why? 5. What changes may be brought about in the blood vessels and the heart by continued use of alcohol and why? 6. How may tobacco affect the heart?

VI. 1. What are the organs of respiration and what are their functions? 2. Tell why pure air is a necessity and how to get it. 3. How are the organs of respiration and the voice injured by alcoholic drinks or tobacco?

VII. 1. What are muscles and their functions? 2. How is strength of muscles affected by lack of exercise, tight clothing, or improper food? 3. Explain the effect of alcohol upon muscular strength and precision.

VIII. 1. Describe the brain, nerves, and spinal cord, and the uses of each. 2. How is brain power developed? 3. How are habits formed? 4. What is the relation of habit to character and success in life?

IX. 1. What causes the flushing of the face which usually follows taking an alcoholic drink? 2. Describe the effect of alcohol upon the higher faculties of the brain? 3. What changes in the brain may the use of alcohol produce? 4. What are the results upon character? 5. What institutions supported by tax on the general public are made necessary largely by the effect of alcohol on the brain? 6. What diseases of the nervous system and what hereditary consequences are due to the use of alcohol? 7. How does tobacco affect the brain and nerves? What is its effect upon brain power and scholarship? 8. What of opium on the nerves and brain?

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CHAPTER IV.

HIGHER EDUCATION OF WOMEN.

General statement.—Description of new institutions: Barnard College; Woman's College of Baltimore; Cleveland College for Women; Evelyn College.
Summary of statistics: Number of institutions; Endowment Funds; Scientific Apparatus; Benefactions; Income; Degrees.
Course of study for A. B. degree in fifteen institutions.

GENERAL STATEMENT.

The higher education of women continues to receive marked attention in this country, several institutions for this purpose having been established during the past few years. These institutions make provision for instruction of collegiate grade and are not merely "finishing" schools. The tendency seems to be to establish these institutions as colleges affiliated to universities already established, or at least to locate them in cities where leading universities exist, thus securing to these new schools the advantages of large and well-selected libraries, museums, etc., facilities which otherwise could not be obtained until after a long period of years. Another advantage gained by locating them in university towns consists in this, that very frequently the services of some of the university professors or instructors whose time is not fully occupied with their regular duties can be easily secured for a part of the day. In this manner nearly all the instruction in a few of the more prominent of these institutions is provided by university professors, and this fact has done much toward making their work successful. A short account of the establishment of some of the institutions recently founded is here given.

DESCRIPTION OF NEW INSTITUTIONS.

Barnard College.—Since the year 1885 Columbia College, New York, has granted the degree of bachelor of arts to women who have pursued a course of study equivalent to that for which the degree is conferred in the school of arts. Notwithstanding the degree was conferred by the college no provision was made by which the women pursuing this course could obtain instruction from the faculty, although those who had secured this degree might study for higher degrees under the direction of the professors of the college. The suggestion was therefore made to found a college where women studying for the Columbia degrees could receive instruction from the college faculty. This proposal received the official approval of the trustees of Columbia in March, 1889, and the college was opened for instruction in the following October. The name given to the new institution is Barnard College, in honor of the late Dr. F. A. P. Barnard, who had always taken great interest in the higher education of women and had advocated granting to women full opportunity for collegiate training. The course of study is identical with that of the School of Arts of Columbia College, and is intended to give to the girls of New York and its vicinity the same instruction that is given to the boys. In order that the status of this institution may be made clear the following is reprinted from the first report of the academic committee:

"The entrance examination papers are the same for the students of Barnard and Columbia, the papers are passed upon by the same examining board, the course of study is the same, and at the end of the course the degree awarded is the same. These facts are emphasized because nothing is so constantly mis-

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understood as the fact that Barnard College has no separate academic existence. Educationally considered, Barnard is Columbia. Its only autonomy is administrative and financial."

The establishment of Barnard College rendered unnecessary the continuance of the collegiate course for women by Columbia, and no new students in that course are received; but those who have already been admitted to the course will be allowed to complete it.

Barnard College does not yet possess an endowment fund, but depends for its support upon the fees from its students and upon yearly contributions. Strenuous efforts are being made to raise an endowment sufficient to make the institution in a measure independent of students' fees.

Although Barnard has no productive funds,[1] on account of its relations with Columbia College it has been able to exact that its students should be fully prepared to enter upon the course as laid down. It has been decided by the authorities, as a result of the experience of the first year, to accept, at least for some years to come, only regular students in its undergraduate classes. This was rendered necessary by the large number of students who wished to enter upon special courses. Students who wish to pursue special courses in botany and chemistry only will be admitted, but such students must pass the examinations required for admission to the freshman class. The first year's work of the college proved successful. There were thirty-six students in attendance, which number was increased to forty-five at the beginning of the second year; of these, eighteen are in the regular classes, eight are graduate students, and sixteen are specials in chemistry and botany only, while three are specials from last year who are permitted to remain.

Woman's College of Baltimore.—Another addition to the institutions for the higher education of women is the Woman's College of Baltimore, Maryland. This institution was first opened for instruction in Septemb r, 1888, with fifty students, while the number in attendance during the year 1889-90 was two hundred and eighty-three. Of this number only thirty were in attendance upon regular undergraduate courses, one hundred and thirty-three were in special or partial courses, while the remainder were in the preparatory department. The name of this department has been changed to Girls' Latin School of Baltimore and the purpose is to give it a separate organization.

The institution was founded "to provide women with the best facilities for securing liberal culture. Its primary purpose is to meet the educational demands arising in the Methodist Episcopal Church. It was established by action of that church, and is conducted under its fostering care. At the same time it was not planned and is not managed in an exclusive or sectarian spirit."[2]

The buildings, three in number, have been erected since 1887 and are valued at $340,000, while the productive funds of the college amount to $150,000. The president of the institution is Rev. John F. Goucher, D. D.

The scheme of instruction consists of four years' courses of study leading to the degree of bachelor of arts, supplemented by such instruction in subcollegiate courses as may be found necessary. No election of studies is allowed in the first collegiate year and but little in the second. In the third and fourth years a wide range of choice is permitted, to accord with individual tastes or to meet the demands of preparation for practical work.

Cleveland College for Women.—The Cleveland College for Women, Cleveland, Ohio, was first opened for instruction in 1888 as a department of Western Reserve University. At the same time the trustees of the university decided to receive no more women into Adelbert College. That the success of the new school might be assured, the faculty of Adelbert College generously offered their services for a term of years as instructors. During the first year twenty-three young women were admitted, but two of whom were in the regular courses. During 1889-90 the number of students increased to thirty-eight, eleven of whom were in the regular courses, of which there are three, viz, the classical and modern language courses, leading to the degree of A. B. and the Latin English course to that of PH. B. The institution received $100,000 from Mrs. Eliza A. Clark, one-half of which is to be used for the erection of a building and the remainder invested as an endowment fund.

Evelyn College.—In 1887 Evelyn College, an institution for women, was opened at Princeton, N. J. Its location at this place gives the institution very great advantages, inasmuch as the use of the libraries and museums of the College of

[1] On the settlement of the Fayerweather estate, New York, Barnard will receive a fund of $100,000.

[2] Annual catalogue, 1890.

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New Jersey, popularly known as Princeton College, are granted to the students. The college offers the following courses of study:

I. A classical and scientific course corresponding to that of Princeton College, including the lectures of the professors and examinations upon them.

II. Post-graduate courses under the direction of the professors of Princeton College.

III. A special or elective course with lectures and college advantages, in which French and German may be substituted for Latin and Greek, and other modifications made to meet the requirements of those who, for want of time or for other reasons, are prevented from taking the full college course.

IV. Preparatory classes, with reference to either collegiate or special work.

V. Opportunities for the study of music, art, and modern languages, including constant conversation in French and German.

Evelyn College grants its own degrees, and in this respect it differs from Barnard College, whose students receive the Columbia degree. Another point of difference between these two institutions is that while Evelyn gives instruction in preparatory studies, Barnard receives only those as students who are already prepared to enter the freshman class. Thus of the forty-six students in attendance at Evelyn during the year 1889–90, only four are reported as in the regular undergraduate courses.

PREPARATORY DEPARTMENTS, ETC.

It can not but be deplored that so many of the higher institutions of learning in this country are compelled, either through the lack of good preparatory schools or on account of insufficient endowment funds, to maintain preparatory and other departments which are neither collegiate, professional, nor post-graduate. The maintenance of such departments calls for a part of the valuable time of a number of professors which otherwise could be devoted entirely to the collegiate classes or be spent in the necessary study and research so indispensable to the college professor of the present time. But the large number of institutions claiming to give higher instruction, especially those for women, renders it necessary for the larger part of them to maintain all grades of instruction, so that a large number of students may be enrolled, the tuition fees of whom are necessary to meet the expenses of the institutions. Some idea of the amount of labor that is imposed on some of the professors of colleges may be formed from the fact that in one of the colleges for women five professors give all the instruction to sixty students in the preparatory department, twenty students in the seminary or academic department, and fifty students in the collegiate department, to say nothing of the instruction in music and art, which of course is furnished by these professors.

A majority of the colleges for women are without endowment and are therefore compelled to rely in great part if not entirely upon the fees received from the students. This is especially the case with the large number of such institutions in the South, where more than 68 per cent of all the institutions for the higher education of women exclusively are situated.

The list of colleges for women contains a large number of institutions which should really be classed as secondary schools, but which, by virtue of the authority to confer degrees granted them by the several State legislatures, demand to be included in the table devoted to colleges for women. This fact necessitates the incorporation in this table of institutions not authorized to confer degrees, but which maintain courses of study that are by far superior to the courses for which regular collegiate degrees are conferred by a large number of the institutions. In order to show how easy it is to obtain a degree in one of these the following course of study for which the degree of A. B. is conferred is taken from its catalogue:

JUNIOR CLASS.

First Semester.	*Second Semester.*
Latin Grammar and Reader.	Latin Grammar and Reader.
Arithmetic, Mental and Written.	Rhetoric.
Algebra.	History of England.
Physiology.	Algebra.
Civil Government.	Botany.

MIDDLE CLASS.

Latin, Cæsar.	Latin, Cicero.
Latin Composition.	French or German.
French or German.	English Literature.
Algebra.	Studies in English.
General History.	General History.

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SENIOR CLASS.

Latin, Virgil.	Latin, Horace.
French or German.	French or German.
Plane Geometry.	Solid Geometry.
Zoölogy.	Physics.

FOURTH YEAR CLASS.

Critical Readings.	Logic.
Trigonometry.	Astronomy.
Chemistry.	Geology.
Psychology.	Evidences of Christianity.
Physical Geography.	Ethics.
	Senior Review.

A comparison of this course with the admission requirements of institutions like Wellesley, Bryn Mawr, etc., shows that the above course for the first three years is little more than what is required for admission to the freshman classes of institutions like those above named. Again, it will be seen that Greek has no place whatsoever in the curriculum. The above course is a fair sample of the courses of study offered by a number of colleges for women and shows that there is room for considerable improvement in this class of institutions.

This state of affairs is due, without doubt, to the lack of endowment funds. In connection with this subject W. Le Conte Stevens says: "Experience has amply demonstrated that no institution of learning can preserve a high standard of scholarship and present an extensive course of studies for selection unless possessed of a permanent endowment, so as to be wholly or partly independent of the fluctuations of patronage. Without this it is like an engine without a fly-wheel."[1] A glance at column 17 of the table of colleges for women will show that this important feature of institutions for higher education is rendered prominent by its infrequent appearance in the tabulation of the statistics. The table on the following page shows that the total amount of endowment funds reported by the 179 institutions is $2,609,661, of which amount $1,901,461, or 72.8 per cent, is reported by 12 institutions of the North Atlantic Division.

In a large number of cases the institutions are either owned by the president or leased to him by the owners, and he makes out of it whatever he can. In this respect these institutions differ very materially from the coeducational and male institutions, where the president is generally engaged by a board of trustees, by whom his work and actions are controlled and from whom he receives a stated salary.

SUMMARY OF STATISTICS.

The following table presents the summary, by States, of the statistics of colleges for women for the year 1889–90:

[1] North American Review, vol. 136, p. 28.

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TABLE 1.—*Summary of statistics of colleges for women for 1889–90.*

State.	No. of institutions.	Professors and instructors.			Students.					State scholarships.	Other scholarships.	Volumes in libraries.	Value of scientific apparatus.	Value of grounds and buildings.	Productive funds.	Benefactions.
		Male.	Female.	Total.	Preparatory department.	Academic department.	Collegiate department.	Resident graduates.	Total number.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Alabama	8	13	84	97	225	179	857	22	1,298	.....	11	11,296	$8,350	$465,000	.....	$10,500
California	3	9	50	59	113	205	29	.....	347	.....	11	48,500	7,000	583,220	$80,000	.....
Georgia	11	30	76	106	437	140	1,184	17	1,830	.....	18	12,450	8,850	569,500	78,300	750
Illinois	6	16	70	86	178	.....	328	3	693	.....	3	9,200	6,800	325,000	17,000	3,000
Kansas	2	2	20	22	116	.....	88	.....	204	.....	2	1,752	1,030	382,000	.....	.....
Kentucky	17	35	130	165	637	283	1,184	9	2,212	.....	14	14,000	7,370	531,000	.....	10,900
Louisiana	3	5	17	22	80	25	168	.....	273	2	30	2,700	475	70,000	30,000	.....
Maine	2	14	13	27	55	341	48	.....	444	5	2	9,500	7,000	207,000	150,000	5,000
Maryland	3	17	27	44	145	.....	202	1	481	22	11	3,200	11,400	480,000	182,000	61,000
Massachusetts	7	98	155	270	.....	447	1,370	16	1,921	.....	142	64,864	172,900	2,004,425	822,739	65,542
Minnesota	2	3	15	18	16	32	16	.....	64	0	0	1,382	800	70,000	0	2,258
Mississippi	12	16	93	109	227	280	605	2	1,632	301	.....	8,150	3,400	252,500	.....	6,700
Missouri	12	25	99	131	206	186	781	3	1,555	.....	.....	12,000	5,640	580,000	76,000	19,000
New Hampshire	2	5	11	16	15	20	.....	.....	259	.....	3	1,400	1,000	135,000	51,000	2,000
New Jersey	2	12	9	21	18	23	4	1	93	.....	.....	2,000	.....	.....	.....	.....
New York	7	33	114	147	526	367	547	13	1,536	.....	34	56,120	120,210	1,159,387	867,722	18,157
North Carolina	15	37	114	151	380	341	619	13	1,715	.....	13	15,550	5,670	623,000	4,000	570
Ohio	8	42	86	128	183	24	452	4	766	.....	7	7,600	6,450	615,000	159,000	75,000
Pennsylvania	10	54	102	156	182	228	512	33	1,289	.....	62	33,750	20,600	948,147	10,000	1,765
South Carolina	7	12	48	60	263	145	599	8	1,025	.....	2	3,051	2,305	144,000	1,000	15
Tennessee	13	24	94	168	337	252	741	19	2,341	.....	31	21,075	11,250	522,200	38,500	2,400
Texas	3	8	35	43	178	176	167	.....	521	.....	4	13,400	675	180,000	.....	.....
Virginia	19	60	158	218	389	133	1,228	16	2,062	1	9	7,950	6,525	610,000	7,500	8,700
West Virginia	3	2	16	18	15	.....	79	.....	144	.....	.....	550	200	28,000	.....	.....
Wisconsin	2	5	12	17	102	.....	23	1	146	0	1	5,060	3,000	125,000	40,000	10,000
North Atlantic Division	30	210	401	637	796	1,426	2,481	63	5,542	5	243	169,634	321,710	4,453,959	1,901,461	92,464
South Atlantic Division	58	158	439	597	1,629	759	3,911	55	7,257	23	53	42,751	34,950	2,454,500	272,700	71,035
South Central Division	56	101	453	604	1,684	1,196	3,702	52	8,277	303	90	70,621	31,520	2,020,700	63,500	30,500
North Central Division	32	93	302	402	801	242	1,688	11	3,428	.....	13	36,994	23,739	2,047,000	292,000	109,258
Western Division	3	9	50	59	113	205	29	.....	347	.....	11	48,500	7,000	583,220	80,000	.....
Total	179	577	1,648	2,299	5,023	3,827	11,811	181	24,851	331	410	368,500	418,900	11,559,379	2,609,661	303,257

The total number of colleges and seminaries for women reporting to the Bureau during 1889–90 was 179, which is 19 less than were included under the same category in 1888-89. A number of institutions hithertore ported as colleges or seminaries for women have been classed this year as secondary schools. This action was warranted either by some statement of the reporting officers or by the work of the institutions as shown by an examination of the catalogues. Owing to the widely diversified characteristics of these institutions it is a very difficult matter to devise some standard of classification which, if adopted, would give due credit to all the institutions for the work which is done by them. A few of the better class give instruction which will compare favorably with that afforded by some of the best male and coeducational institutions. But the large majority of the institutions do not come up to this standard. They begin by admitting pupils to the primary and preparatory departments, usually organized on the plan of a graded school, and conduct the pupils by successive stages, through the academic and collegiate departments. The course in the last-named department would not in a large number of cases take a student farther than the end of the sophomore year in a college for males.

An examination of a number of the catalogues also shows that with some exceptions Greek is entirely omitted from the curriculum. We also find that some institutions will give the degree of A. B. for a course which is considerably inferior to courses which in other institutions are not accorded a degree. It will therefore be seen that a classification based only on the authority to confer degrees would not be a just classification in this case. Until a suitable standard shall be decided upon, the classification adopted a few years ago will be continued.

A glance at Division A of the table[1] of colleges for women will show that the number of institutions in this division has been increased from 8 in 1888–89 to 14 in the current year. This increase resulted from the establishment of a few new institutions and the reorganization of several others, through which reorganization they were raised to the regular college grade. In a few cases the number of students in the collegiate departments is very small, but such is nearly always the case in newly established institutions or in newly organized departments of institutions.

Endowment.—The institutions in Division A are as a rule fairly well endowed, differing somewhat in this respect from the institutions included in Division B. The total amount of permanent productive funds reported by the institutions in both divisions of the table was $2,609,661, of which amount $1,970,461, or 75.5 per cent, was reported by 10 of the institutions in Division A, while the remainder was reported by 24 of the institutions in Division B, thus leaving 145 institutions not reporting any productive funds.

Scientific apparatus.—The total value of scientific apparatus reported was $418,900, of which $305,391, or 72.9 per cent, was reported by 12 of the institutions in Division A, while the remainder was reported in small amounts by 97 of the institutions in Division B. This latter fact would seem to show that very little attention is paid by the institutions in this division to the practical study of chemistry, physics, astronomy, etc., for the prosecution of which apparatus is absolutely necessary.

Benefactions.—One evidence of the greater popularity of the institutions in Division A is shown in the column of the table devoted to benefactions. The total amount of gifts and bequests to the 179 institutions during 1889–90 was $303,257, and of this amount $193,502, or 63.8 per cent, was reported by 9 of the 14 institutions in this division, while the remaining $109,775 was reported by 29 of the institutions in Division B. The latter amount was reported in sums varying from $15 to $20,000, while the former was comprised of sums ranging from $465, reported by Bryn Mawr College, to $61,000, reported by the Woman's College of Baltimore.

Income.—The attempt to tabulate and publish the income of these institutions has been abandoned for the present. It was found that the reports on this subject were so meagre that the totals would not be valuable for any purpose whatsoever. As said before, a large number of these institutions are owned or leased by the presidents, who manage and conduct them for the profits that can be made. In such cases the questions relating to finances of the institutions remained, as a rule, unanswered, and when they were answered, the replies to the inquiry asking for the amount received from tuition fees usually included the amount received for board, lodging, etc. As it was desired to learn the amount

[1] See table of statistics of colleges for women.

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expended purely for educational purposes, it is evident that such answers could not be used and were practically useless.

Degrees.—The following table presents the summary, by States, of the number of different degrees conferred by colleges for women in 1889–90:

TABLE 2.—*Summary of degrees conferred by colleges for women in 1889–90.*

States.	Total number.	M. E. L. or B. L.	A. B.	A. M.	B. S.	M. L. A.	Mus. B.	L. S.	L. A.	M. S.	M. E. C. L.
Alabama	68	49	6	13	.....	.....	.....	.....	.....	.....	.....
California	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....
Georgia	94	.....	87	.....	7	.....	.....	.....	.....	.....	.....
Illinois	29	7	11	.....	.....	10	1	.....	.....	.....	.....
Kansas	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Kentucky	51	4	12	10	25	.....	.....	.....	.....	.....	.....
Louisiana	15	11	.....	1	3	.....	.....	.....	.....	.....	.....
Maine	13	.....	.....	3	.....	.....	.....	4	6	.....	.....
Maryland	16	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
Massachusetts	177	16	124	1	35	.....	1	.....	.....	.....	.....
Minnesota	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Mississippi	66	56	8	2	.....	.....	.....	.....	.....	.....	.....
Missouri	51	25	12	14	.....	.....	.....	.....	.....	.....	.....
New Hampshire	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York	69	.....	62	5	2	.....	.....	.....	.....	.....	.....
North Carolina	32	4	23	.....	5	.....	.....	.....	.....	.....	.....
Ohio	7	.....	1	1	5	.....	.....	.....	.....	.....	.....
Pennsylvania	52	9	35	4	4	.....	.....	.....	.....	.....	.....
South Carolina	67	9	47	7	4	.....	.....	.....	.....	.....	.....
Tennessee	108	39	54	12	.....	.....	.....	.....	.....	3	.....
Texas	9	1	5	.....	3	.....	.....	.....	.....	.....	.....
Virginia	24	.....	9	13	.....	.....	.....	.....	.....	.....	2
West Virginia	10	8	1	.....	1	.....	.....	.....	.....	.....	.....
Wisconsin	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....
United States	978	261	510	86	94	10	2	4	6	3	2

Course of study.—In the report of the Bureau for 1888–89 appears a table giving the courses of study in one hundred colleges and universities, including a few of the colleges for women of Division A. A similar scheme, somewhat condensed, has been devised for the comparative representation of courses leading to the degree of A. B., as given in fifteen of the institutions included in Division B. All the studies have been grouped under five headings, viz, language, mathematics, natural science, history and geography, and philosophy and civil government. An examination of the table will show that while a few of the institutions have a fairly good course for the degree of A. B., in other cases the same degree is earned quite easily. The course, as set forth in the latest catalogues of the several institutions, is as follows:

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TABLE 3.—*Courses of study leading to the degree of A. B. in 15 colleges and seminaries for women.*

Name.	Languages.	Mathematics.	Natural science.	History and geography.	Philosophy and civil government.
1. Alabama Conference Female College, Tuskegee, Ala.	Freshman—Latin grammar and reader (Harkness), selections from Cornelius Nepos, English composition, rhetoric. Sophomore—Cæsar, Cicero, mythology, rhetoric. Junior—Rhetoric (higher), critical study of English classics, Virgil, French or German. Senior—Studies in English classics, history of English literature (Gilman), French or German (Stern).	Freshman—Arithmetic (Robinson), algebra (Wentworth). Sophomore—Arithmetic (reviewed), higher algebra. Junior—Geometry (Davies's Legendre). Senior—Plane, analytical and spherical trigonometry, mensuration (Davies), astronomy (Lockyer).	Sophomore—Physiology (Hutchinson), botany (Gray). Junior—Natural philosophy (Peck's Ganot), chemistry (Houston).	Freshman—History of England, general history. Sophomore—History of Rome (Sewell). Junior—History of Greece (Sewell). Senior—History of England (Montgomery), physical geography (Appleton), history of United States (Chambers).	Senior—Psychology (McCosh), moral science (Seelye's Hickok), evidences of Christianity. Bible studies throughout the course.
2. Santa Rosa Ladies' College, Santa Rosa, Cal.	Freshman—Virgil, prose composition, Horace, Homer's Iliad, Odyssey, English composition and rhetoric, elocution. Sophomore—Cicero, prose composition, Herodotus, Sophocles, English literature, English composition, elocution. Junior—Tacitus, Demosthenes, rhetoric, English composition, elocution. Senior—English literature, Anglo-Saxon, history of Roman literature, history of Greek literature, English composition.	Freshman—Algebra, geometry, bookkeeping. Sophomore—Trigonometry, bookkeeping. Junior—Bookkeeping, astronomy.	Freshman—Natural history, botany, zoölogy, physiology. Sophomore—Chemistry, biology. Junior—Geology, mineralogy. Senior—Astronomy.	----------	Junior—Logic (McCosh), political economy, civil government. Senior—Mental philosophy (Porter), moral philosophy, Christian evidences.
3. Wesleyan Female College, Macon, Ga.	Freshman—Word lessons (Reed), higher lessons in English (Reed and Kellogg), Latin grammar (Harkness), Cæsar, Ovid, French Principia (Part I), elocution, composition. Sophomore—Composition and rhetoric (Hart), Latin grammar, Cæsar, Cicero, Latin prose composition, Greek grammar and reader (Bullion), French Principia (Parts I and II), practical elocution (Shoemaker). Junior—Rhetoric (A. S. Hill), English literature (Shaw, Tuckerman, Backus), classic English reader (Swinton), Latin grammar, Horace, Livy, Latin prose composition, French Principia (Part II), French prose classics, Gastineau's conversation method, Greek grammar, Greek testament, Anabasis, German Principia (Part I), Studien and Plaudereien, practical elocution. Senior—Tacitus, Cicero, Latin prose composition, remnants of early Latin (Allen), Greek grammar, Homer, Greek testament.	Freshman—Arithmetic (Robinson), algebra (Wentworth). Sophomore—Geometry (Wentworth). Junior—Geometry, trigonometry and conic sections (Loomis). Senior—Astronomy (Snell's Olmstead), bookkeeping.	Sophomore—Chemistry (Clark). Junior—Physics (Gage), botany (Wood). Senior—Physical geography (Appleton), geology (LeConte).	Freshman—History of United States (Derry). Sophomore—History of England (Montgomery). Junior—Modern history (Myers).	Junior—Moral philosophy (Peabody). Senior—Logic (Jevons-Hill), political economy (Chapin), mental philosophy (Haven), Christian evidences (Fisher). Study of the Bible throughout the course.

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	French tragedy and versification, Gastineau's conversation method, selections from best German writers, German composition, English literature, Milton's Paradise Lost, Lycidas, Life of Thackeray, English humorists (Thackeray), Henry Esmond, Shakespeare's Hamlet and Merchant of Venice, practical elocution, composition.				
4. Rockford Seminary, Rockford, Ill.	Freshman—Livy, Horace, Latin prose composition, *Homer, Herodotus, Xenophon, Hermann und Dorothea* or *Iphigenie auf Tauris, Deutsche Grammatik* (Gürke), *Wallenstein's Tod, Nathan der Weise, Littérature Classique to the Seventeenth Century, Le Cid, Athalie und Iphigenie, Le Misanthrope, Tartuffe*, rhetoric, elocution. Sophomore—Tacitus, *Cicero, Horace, Juvenal, Homer, Plato, Sophocles, Faust (Part I), Geschichte der deutschen Literatur, Otto, Littérature Française from the Seventeenth Century, selections from French authors*, English literature (Shaw), rhetoric, elocution. Junior—Rhetoric, elocution, *Cicero, Thucydides, Faust (Part II), Corneille et son Temps, Horace, Italian grammar and prose composition, Primo Libro di Lettura, Plautus, Æschylus, Causeries historiques et littéraires* (Souvestre), *Pensées (Pascal), Terence, Aristophanes, selections from Italian classics, history of Italian literature.* Senior—Rhetoric, elocution. *Tacitus, Plato, Aristotle, Nibelungenlied* or *Parzival und Titurell, Mme. de Staël, Vita Nuova, L'Inferno, Lucretius, Bernardin de St. Pierre, Cousin, Il Purgatorio, old and middle English, history of ancient literature, later Latin writers, Victor Hugo, Il Paradiso.*	Freshman—Advanced algebra, plane trigonometry (Chauvenet), solid geometry (Wentworth). Sophomore—*Analytical geometry, spherical trigonometry.* Junior—*Physical astronomy, mathematical astronomy* (Godfray). Senior—*Modern synthetic geometry, differential calculus, integral calculus.*	Freshman—Practical physiology, botany (Gray). Sophomore—*Botany*, theoretical chemistry, *zoology.* Junior—*Physics.* Senior—*Mineralogy, physiology, geology.*	Freshman—Bible. Sophomore—*History of Greece, history of Rome, mediæval history*, Bible. Junior—Bible, *modern history.* Senior—*History of art, constitutional history of United States, historical exercises, history of music, constitutional history of England.*	Junior—Logic (Jevons-Hill). Senior—Psychology (Dewey), evidences of Christianity, principles and practice of morality (Robinson), history of philosophy (Schwegler), *political economy, Jowett's dialogues of Plato.*
5. Logan Female College, Russellville, Ky.	Freshman—Cæsar. Latin prose composition, rhetoric (Kellogg), elocution. Sophomore—Cicero, Virgil, Latin prose composition, history of literature (Shaw). Junior—Livy, Latin prose (Daniels), studies in English (Smith), Shakespeare. Senior—Horace.	Freshman—Higher algebra (Wells). Sophomore—Geometry (Wells). Junior—Trigonometry (Wells). Senior—Astronomy (Young).	Freshman—Physiology (Brown), zoology (Steel). Sophomore—Physics (Norton), physical geography. Junior—Chemistry (Eliot & Storer), botany (Gray). Senior—Geology (Dana).	Freshman—History of England (Berard). Sophomore—History of modern Europe (Shaffer). Senior—General history (Sheldon).	Junior—Civil government (Andrew). Senior—Political economy (Ely), psychology (Hill).
6. Silliman Collegiate Institute, Clinton, La.	Higher lessons in English (Reed and Kellogg), elocution (Kidd), analysis (Green), English classics, outlines of history, composition, English literature (Kellogg), rhetoric (Kellogg), essays, Latin grammar and reader (Bingham), Cæsar, Virgil, Cicero, Horace, Chouquet's First French lessons, French grammar (Pinney and Arnoult), French reader (Collot).	Arithmetic (White), algebra (Wentworth), geometry (Wentworth), plane trigonometry.		History of United States (Thalheimer), history of England (Thalheimer), studies in general history (Sheldon).	Mental philosophy (Haven), logic (Coppée), evidences of Christianity (Alexander), science of government (Alden).

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TABLE 3.—*Courses of study leading to the degree of A. B. in 15 colleges and seminaries for women*—Continued.

Name.	Languages.	Mathematics.	National science.	History and geography.	Philosophy and civil government.
7. Maine Wesleyan Seminary and Female College, Kent's Hill, Me.	First year—Livy, Cicero, Ovid or methods of teaching, French, French composition, French literature. Second year—Tacitus, rhetoric, German. Third year—German, German composition, English literature, German literature, elocution. Fourth year—German, *Horace*, elocution.	First year—Algebra, drawing. Second year—Geometry, trigonometry, astronomy. Third year—Analytical geometry.	First year—Physiology, physics. Second year—Chemistry, comparative zoölogy. Third year—Botany. Fourth year—Botany, geology, *practical chemistry and mineralogy.*	First year—History of Rome. Second year—Physical geography. Third year—English history, American history. Fourth year—History of civilization.	Third year—Political economy. Fourth year—Mental science, theism and Christian evidences, moral science, logic.
8. Albert Lea College, Albert Lea, Minn.	Freshman—Cicero, Latin prose composition (Daniel), lectures on Roman law (Hadley), Livy, Xenophon, Greek prose composition, Lysias, study of words (Trench), English composition, elocution. Sophomore—Demosthenes, Plato, Thucydides, Herodotus, Horace, rhetoric (Whately), history of rhetoric, composition, philosophy of style (Spencer), analyses of orations, etc.; German grammar (Whitney), Im Zwielicht, Der Neffe als Onkel, or French grammar (Keetel), Petites Causeries (Sauveur), La Fontaine's Fables, Le Roman d'un Jeune Homme Pauvre (Labiche), Le Cid; Grecian literature, elocution, Roman literature. Junior—Critical study of English authors, English language and literature (Kellogg), American literature, Tacitus, Pliny, Plautus, Latin thesis, Euripides, Sophocles, Greek testament, German grammar, Wilhelm Tell or Athalie (Racine), Le Misanthrope, composition. Senior—Linguistic science (Whitney), history of literature or history of art, Homer.	Freshman—Plane trigonometry (Loomis), higher algebra, surveying. Sophomore—Analytical geometry (Loomis). Senior—Astronomy (Newcomb and Holden).	Sophomore—Physics (Ganot), botany (Gray). Junior—Chemistry (Eliot and Storer), physiology (Martin), geology (Dana).	Freshman—Ancient history, Bible—Sophomore—Bible. Junior—English history (Green), American history, history of France (Brewer), Bible. Senior—Bible.	Junior—Constitutional law (Andrews). Senior—Metaphysics (Bowen's Hamilton), logic (Jevons), political economy (Ely), Christian evidences (Fisher), moral philosophy (Calderwood), history of philosophy (Seelye's Schwegler, Haven).
9. Blue Mountain Female College, Blue Mountain, Miss.	Freshman—Higher lessons in English (Reed and Kellogg), rhetoric (Hart), Latin grammar and reader (Bingham). Sophomore—History of English literature (Shaw), choice specimens of English literature (Shaw), longer English poems (Hale), rhetoric (Hart, Kellogg), Latin grammar and prose composition, Cæsar, Cicero. Junior—Anglo-Saxon primer (Sweet), Anglo-Saxon reader (March), history of English language (Lounsbury), rhetoric (Kellogg), Latin grammar and prose composition, Virgil, Horace. Senior—Selections from Chaucer, Milton, Shakespeare,	Freshman—Grammar-school arithmetic (Wentworth). Sophomore—Elementary algebra (Wilson), bookkeeping (Groesbeck). Junior—Algebra (Wentworth), bookkeeping. Senior—Geome-	Sophomore—Physiology, natural philosophy. Junior—Geology (Steele), botany (Wood). Senior—Chemistry (Steele).	Freshman—Geography (Maury), physical geography (Maury), history of United States (Barnes). Sophomore—Historical and biographical readings. Junior—General history (Barnes).	Sophomore—Intellectual and moral philosophy (Wayland). Junior—Political economy (Wayland and Chapin). Senior—Logic (Jevons-Hill), mind (Watts).

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	rhetoric, Latin grammar and prose composition, Livy, Tacitus.	try and trigonometry (Wells), astronomy, high-school arithmetic (Wentworth).			
10. Stephens College, Columbia, Mo.	First year—Latin grammar and reader, rhetoric. Second year—Cæsar, Cicero, Latin composition, English literature, studies in English, French or German. Third year—Virgil, Horace, French or German. Fourth year—Critical readings.	First year—Arithmetic, algebra. Second year—Algebra. Third year—Plane geometry, solid geometry. Fourth year—Trigonometry, astronomy.	First year—Physiology, botany. Third year—Zoology, physics. Fourth year—Chemistry, geology.	First year—History of England. Second year—General history. Fourth year—Physical geography.	First year—Civil government. Fourth year—Logic, psychology, evidences of Christianity, ethics.
11. Mary Sharp College, Winchester, Tenn.	Freshman—Latin grammar (Allen and Greenough), Latin exercises (Jones), Latin reader, English grammar (Whitney), rhetoric (Hill). Sophomore—Cæsar, Virgil, Greek grammar (Goodwin), Greek lessons (Leighton), Anabasis, Mueller's grammar and reader, Anglo-Saxon grammar (March), study of words (Trench), rhetoric (Hill's Science), French grammar and reader (Fasquelle), Contes Choisis, (Télémaque). Junior—Cicero, Latin prose composition (Allen), Horace, Xenophon, Demosthenes, Greek prose composition (Boise), Morris's Accidence, French and German plays and dramas, American poems (Scudder). Senior—Livy, Tacitus, Latin prose composition, Thucydides, Plato, Æschylus, Greek prose composition, Hale's English poems, Shakespeare's plays.	Freshman—Arithmetic (Robinson), algebra (Robinson), plane geometry (Robinson). Sophomore—Algebra, solid geometry, trigonometry (Robinson). Junior—Astronomy (Norton), conic sections and analytical geometry (Robinson). Senior—Calculus (Olney).	Sophomore—Botany (Gray). Junior—Mathematical philosophy (Kimball and Snell's Olmstead), chemistry (Shepherd), physics (Peck's Ganot). Senior—Geology of Tennessee, geology (Dana and Le Conte), electricity and magnetism (Deschanel).	Sophomore—German history (Wanger).	Senior—Logic (N. K. Davis), analogy (Butler), metaphysics (Hamilton).
12. Baylor College, Belton, Texas.	Freshman—English grammar, English composition, beginners' Latin book (Collar & Daniell), fables, Cæsar. Sophomore—Rhetoric, English prose and prose writers (Hunt), Cæsar, Virgil, French grammar (Keetel) and prose readings or German grammar (Otto), Grimm's Märchen and English into German. Junior—History of English language and literature (Backus's Shaw's Manual, Lounsbury), Horace, Cicero, French grammar, composition, and readings or German grammar, composition, Hermann und Dorothea, and Wilhelm Tell. Senior—Critical study of Shakspeare (Hudson & Rolfe) and other principal poets, philology of the English tongue (Earle), lectures on the masters of English style and the masterpieces in English literature, Livy, Tacitus. Latin grammar and written exercises extend through the course.	Freshman—High-school arithmetic (Wentworth), algebra (Robinson's elementary). Sophomore—Algebra (Robinson's University), elementary geometry (Hill). Junior—Plane geometry, solid geometry, and conic sections (Wentworth). Senior—Trigonometry (Loomis), surveying (Loomis), navigation and spherical trigonometry, astronomy (Hooker).	Freshman—Physiology and hygiene (Hitchcock). Sophomore—Zoology (Nicholson), physics (Avery). Junior—Chemistry (Steele), botany (Wood). Senior—Geology (Le Conte).	Freshman—Physical geography (Maury). Junior—Ancient history (Myers). Senior—Mediæval and modern history (Myers), history of civilization (Guizot).	Junior—Political economy (Wayland). Senior—Mental philosophy (Upham), logic (Coppée), moral science (Alexander), evidences of Christianity (Alexander).

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TABLE 3.—*Courses of study leading to the degree of A. B. in 15 colleges and seminaries for women*—Continued.

Name.	Languages.	Mathematics.	National science.	History and geography.	Philosophy and civil government.
13. Stonewall Jackson Institute, Abingdon, Va.	Freshman—Rhetoric (Clark), history of English language (Shepherd), Latin grammar, Cæsar, elocution. Sophomore—American literature (Beers), English literature (Brooke), elocution, Virgil, Cicero. Junior—English literature, Horace, Livy. French or German may be substituted for Latin. English composition and penmanship throughout the course.	Freshman—Algebra (Wentworth). Sophomore—Algebra, geometry (Hill or Wentworth). Junior—Geometry, trigonometry (Wentworth). Senior—Review of arithmetic and algebra, astronomy.	Freshman—Botany (Steele). Sophomore—Zoölogy (Steele), geology (Steele). Junior—Physics and chemistry (Steele).	Junior—General history. Senior—General history, physical geography (Maury).	Senior—Evidences of Christianity (McIlvaine), psychology (Baker).
14. Wheeling Female College, Wheeling, W. Va.	First year—Latin grammar, Cæsar, Greek grammar, Greek lessons. Second year—Latin grammar, Sallust, Virgil, mythology, Greek reader, Greek grammar, Anabasis, Herodotus, Antegenitus, rhetoric. Third year—English literature, Latin grammar, Cicero, Homer, Horace. Fourth year—Elements of criticism (Kame). Greek is optional with a foreign language.	First year—Algebra. Second year—Geometry. Third year—Trigonometry, astronomy.	First year—Physiology. Second year—Natural philosophy, zoölogy. Third year—Chemistry, botany. Fourth year—Geology, mineralogy.	First year—United States history, physical geography. Second year—History of England, Roman history, Grecian history.	Third year—Mental philosophy. Fourth year—Moral philosophy, logic, philosophy of history, evidences of Christianity, United States Constitution, political economy.
15. Downer College, Fox Lake, Wis.	Freshman—Virgil, Livy, rhetoric. Sophomore—Horace, Cicero, elocution, rhetoric. Junior—Rhetoric and science of language, English literature, Juvenal, Tacitus, Cicero, Roman drama, elocution. Senior—Rhetorical work, elocution, English literature, critical study of modern English prose, Shakespeare, and the drama.	Freshman—University algebra, solid geometry, trigonometry. Sophomore—Analytical geometry. Senior—Astronomy.	Freshman—Zoölogy, botany, hygiene. Sophomore—Physiology, chemistry. Junior—Analytical chemistry or mineralogy, physics. Senior—Geology.	Freshman—Bible. Sophomore—History of England, Bible. Junior—Bible, history of the United States, or history of civilization or library work, history of art or history of philosophy.	Sophomore—Logic (Jevons). Senior—Political economy, psychology, moral philosophy, evidences of Christianity.

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CHAPTER V.

COLLEGES AND UNIVERSITIES OF THE UNITED STATES.

I.—Brief Discussion of the System of Higher Education: Number of Institutions; Tendency of Institutions to Adopt Pretentious Names; Increase in Number of Institutions Due to Various Causes; Character of Universities and Colleges; System and Methods of Instruction; Union College, N. Y., and Scientific Education; Degrees; Value of the Ph. D. Degree.
II.—Summary of Statistics; Coeducation; Teaching Force; Students; Location of Institutions; Distribution of College Students; Income; Income from Productive Funds; Benefactions; State or Municipal Appropriations.
III.—Distribution of Students in Degree Courses from 1876–77 to 1889–90.
IV.—Endowment Funds of Colleges and Universities.
V.—Grounds, Buildings, and Apparatus.
VI.—State Universities.
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VIII.—Organization of a Number of Leading Universities.
IX.—Reorganization of Columbia College.
X.—Brief Description of New Institutions.
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I.—BRIEF DISCUSSION OF THE SYSTEM OF HIGHER EDUCATION.

Number of institutions.—The number of colleges and universities from which this Office has received reports for the year under consideration is 415. The number is constantly increasing; a condition not to be regretted, provided the institutions do work for which they are prepared and equipped and not attempt to give courses of study for the successful prosecution of which they lack both the necessary appliances and finances. As is well known higher education is not and can not be self-supporting and needs considerable aid from outside sources, either in the form of endowment funds or annual gifts or appropriations for current expenses. Notwithstanding this fact it often happens that no sooner is an institution established whose real work ought to be secondary instruction than it organizes a college of commerce, so-called normal, collegiate and graduate departments, and calls itself a university, even if it has no endowment and relies almost entirely for support upon the tuition fees received from the students.

It is frequently the case that some of the smaller institutions of the country advertise graduate or university courses of study, when, in fact, they often have not a sufficient number of professors and instructors to carry on properly the undergraduate work of the institution. In order to make a success of graduate work—work which renders necessary considerable independent research—it is desirable, if not absolutely necessary, for the student to have, at his or her command, large and well-equipped laboratories and libraries such as are far beyond the means of our smaller institutions. Such work ought, therefore, to be left to those institutions that are well endowed enough to provide the appliances which are indispensable for the successful prosecution of the work. The discussions of the relations of institutions to scholastic work and requirements have been intensified and extended by the action of the Harvard faculty in its attempt to shorten the time necessary for the acquisition of the A. B. degree.[1]

Increase in number of institutions.—The age of the institutions for higher education in the United States is inconsiderable when compared with that of European institutions. The first of our colleges, Harvard, was founded in 1638 under circumstances which are familiar. From that time on new institutions were gradually established until now the number exceeds four hundred. This large increase in the number of institutions is due to the munificence of wealthy people who wish to promote the advancement of knowledge, to religious zeal, and to the formation and settlement of new States. The large majority of the

[1] For the discussion of this subject, see p. 799.

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people settling the new States are people of moderate means, who wish to give their children a good education, but who are frequently not able to spend the sum necessary to send them to an institution at a considerable distance from their homes. The desire for an institution of their own, naturally follows, and the attempt to establish one succeeds in the larger number of cases. In most of these attempts the object is accomplished through the aid of some one of the religious denominations by whom the controlling power is retained. The rivalry existing among the several churches frequently causes the establishment of weak colleges in places where more good would be effected by devoting the money thus used to the enlargement and better equipment of some existing institution.

General character of colleges and universities.—Speaking of the general character of the universities and colleges of the United States the Hon. James Bryce, M. P., in The American Commonwealth, says: "Out of this enormous total of degree-granting bodies very few answer to the modern conception of a university. If we define a university as a place where teaching of a high order, teaching which puts a man abreast of the fullest and most exact knowledge of the time, is given in a range of subjects covering all the great departments of intellectual life, not more than twelve and possibly only eight or nine of the American institutions would fall within the definition. Of these nearly all are to be found in the Atlantic States. Next below them come some thirty or forty foundations which are scarcely entitled to the name of universities, some because their range of instruction is still limited to the traditional literary and scientific course, such as it stood thirty years ago; others because, while professing to teach a great variety of subjects, they teach them in an imperfect way, having neither a sufficiently large staff of highly trained professors, nor an adequate provision of laboratories, libraries, and other external appliances. The older New England colleges are good types of the former group. Their instruction is sound and thorough as far as it goes, well calculated to fit a man for the profession of law or divinity; but it omits many branches of learning and science which have grown to importance within the last fifty years. There are also some Western colleges which deserve to be placed in the same category. Most of the Western State universities belong to the other group of this second class, that of institutions which aim at covering more ground than they are as yet able to cover. They have an ambitious programme, but neither the state of preparation of their students nor the strength of the teaching staff enables them to do justice to the promise which the programme holds out. They are true universities rather in aspiration than in fact.

"Below these, again, there is a third and much larger class of colleges, let us say three hundred,[1] which are for most intents and purposes schools. They differ from the *gymnasia* of Germany, the *lycées* of France, the grammar schools of England and high schools of Scotland, not only in the fact that they give degrees to those who have satisfactorily passed through their prescribed course or courses, but in permitting greater personal freedom to the students than boys would be allowed in those countries. They are universities or colleges as respects some of their arrangements, but schools in respect of the educational results attained. These three hundred may be further divided into two subclasses, distinguished from one another partly by their revenues, partly by the character of the population they serve, partly by the personal gifts of the president, as the head of the establishment is usually called, and of the teachers. Some seventy or eighty, though comparatively small, are strong by the zeal and capacity of their teachers, and while not attempting to teach everything, teach the subjects which they do undertake with increasing thoroughness. The remainder would do better to renounce the privilege of granting degrees, and be content to do school work according to school methods."

System and methods of instruction.—About thirty or thirty-five years ago nearly all the colleges and universities of the country prescribed a regular four years' course of study. The course consisted of classics and mathematics followed by the elements of mental and moral philosophy, and at its completion the degree of A. B. was conferred upon the students. The system of a prescribed inflexible course has been abolished by the greater part of all the institutions, and considerable latitude in the matter of choice of studies is allowed. The adoption of the elective system, as it is called, was due to the demand for instruction in scientific studies, in addition to those of the old time curriculum.

Provision for a choice of studies has been made in two different ways, viz, by offering to students the choice of separate and distinct courses of study, and by

[1] The figures here used were taken from the Report of the Commissioner of Education for 1885-86, when the total number of colleges and universities was 345.

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offering electives in a course of study. This latter plan was in vogue to a limited extent in Harvard University as early as 1843–44. The following extract from the catalogue for that year will show the arrangement at that time: "The laws of the University allow, after the freshman year, to the parents or guardians of undergraduates a selection in respect of certain specified studies. This selection must be made known to the faculty on or before the first day of June, in each year. If no notice of such selection be received, in respect of any student, the faculty themselves proceed to assign to such student the elective studies they deem it best for him to pursue. No student is allowed to select or have assigned to him more elective studies than will occupy, with the required studies in recitation and lectures, every week twenty-one hours." At the date specified all the work of the freshman year and a comparatively large part of the work of the sophomore, junior, and senior years remained as required studies. The amount of "required" work has been gradually reduced, and the "elective" increased, until at the present time the only required studies in Harvard are in the freshman year: Rhetoric and composition (three times a week), chemistry (lectures, Thursday, first half year), and German or French for those who do not present both of these languages for admission (three times a week); in the sophomore and junior years the prescribed work consists of themes and forensics; in the senior year no studies are prescribed.

The action of Harvard in offering electives to students was naturally followed by other institutions. These either offered similar privileges or formed new courses of study from which the student could take his choice. It may be well to note the fact that down to the present time none of the institutions allow as much freedom in this respect as Harvard. In many instances election is not allowed until the beginning of the junior year, while in some cases, especially in those institutions that are not well endowed, the prescribed courses are still adhered to. This action is very often a matter not of choice but of necessity, for an elective system can be maintained only by institutions where the teaching staff is able to do justice to a wide range of subjects.

Union College, N. Y., and scientific education.—Union College, Schenectady, N. Y., claims to have been the first college to provide a scientific course of study. The essential features of this system, as originated by Dr. Nott and now so generally adopted, was the substitution of the modern languages and an increased amount of mathematical and physical science in place of the Greek and Roman classics. A scientific course of study was offered by Union in 1833. This course, in 1838–39, was as follows:

FRESHMAN CLASS.

First term:
- Sallust.
- Horace and Latin prosody.
- Herodotus and Thucydides.

Second term:
- Xenophon's Cyropa and Anabasis.
- Horace, Roman Antiquities.
- Cicero de Officiis, de Amicit., etc.

Third term:
- Livy, with composition and declamation.
- Algebra (Bourdon).
- Lysias, Isocrates, and Demosthenes.

SOPHOMORE CLASS.

First term:
- History.
- Arithmetic (Hassler).
- Algebra (Bourdon).

Second term:
- History (Tytler).
- Natural theology (Paley).
- Plane geometry (Legendre).

Third term:
- Natural history (Ware).
- Solid geometry (Legendre).
- Logic (Whately).

JUNIOR CLASS.

First term:
- Trigonometry and applications (Hassler).
- Algebra (Bourdon).
- Rhetoric (Blair).

Second term:
- Chemistry.
- Descriptive geometry (Davies), analytic geometry of two dimensions (Boucharlat).
- Natural philosophy (Farrar's Mech.).

Third term:
- Differential and integral calculus (Boucharlat).
- Analytic geometry of three dimensions (Boucharlat).
- Natural philosophy (Farrar's Mech.).

SENIOR CLASS.

First term:
- Mechanics (Boucharlat).
- Electricity and magnetism, optics (Biot).
- Elements of criticism.

Second term:
- Astronomy.
- Moral philosophy.
- Chemistry (Kames, and lectures).

Third term:
- Law (Kent or Blackstone).
- Anatomy and physiology.
- Chemistry, botany, mineralogy, technology, synoptical view of the sciences.

The studies of the freshman year, as given above, are the same as were pursued at that time by students in the classical course. It will be seen that in the above course of study neither ancient nor modern languages were pursued after the freshman year. This was changed shortly afterwards, for, in the catalogue

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for 1842 we find that Latin (Tacitus and Juvenal) was studied in the first and second terms of the sophomore class and German during the second term of the junior class. French was first offered as an extra study in 1843, and was made a required study during the second term of the junior class in 1850.

From 1838 to 1853 the requirements for admission and the studies of the freshman year of the classical course were identical with those of the scientific course, and election between the two courses was made at the beginning of the sophomore year. In 1854 the scientific course was remodeled, with the result that ancient languages disappeared entirely from it. The requirements for admission, which were necessarily modified, demanded that the candidate "be thoroughly prepared in English grammar and the other usual elementary studies, and be quite familiar with practical arithmetic.

From what has here been said, it will be seen that a student can at the present time pursue almost any studies above what is generally required for admission to college during a period of four years, and at the completion thereof receive his degree. Through the adoption of the elective system it naturally follows that a degree given by one college does not necessarily mean the same thing as the same degree given by another college. In fact, some institutions frequently confer the same degree upon students who pursued widely different courses of study. Harvard, for instance, offers for 1890–91 219½ full courses of instruction, of which 18.2 courses must, and 25.2 courses may be taken to obtain the A. B. degree. From this total number of courses it will be seen that a large number of combinations, each leading to the A. B. degree, could be made.

Degrees.—The fact that no fixed value is attached to the degrees in this country causes considerable confusion, especially among foreigners. Respecting the significance of the degrees given in this country, Professor Bryce, in the American Commonwealth, says: "As regards the worth of the degrees given, there is, of course, the greatest possible difference between those of the better and those of the lower institutions; nor is this difference merely one between the few great universities and the mass of small colleges or Western State universities, for among the smaller colleges there are some which maintain as high a standard of thoroughness as the greatest. The degrees of the two hundred colleges to which I have referred[1] as belonging to the lower group of the third class have no assignable value, except that of indicating that a youth has been made to work during four years at subjects above the elementary. Those of institutions belonging to the higher group and the two other classes represent, on an average, as much knowledge and mental discipline as the poll or pass degrees of Cambridge or Oxford—possibly rather less than the pass degrees of the Scottish universities. Between the highest American degrees and the honor degrees of Oxford and Cambridge it is hard to make any comparison."

The number of different kinds of degrees conferred by American colleges and universities is constantly increasing and is very often the cause of considerable confusion. Thus, for instance, we find that the degree of Ph. B. (bachelor of philosophy) is given by one institution at the completion of a course of study for which in another institution the degree of B. S. (bachelor of science) is conferred.

Value of the Ph. D. degree.—For some time past many of the leading colleges and universities and a few scientific associations of the United States have attempted, by resolutions and by example, to restore its original value to the degree of Ph. D. In Germany this degree is the reward purely of scholarship, which must be shown by examinations and other tests; but in this country the value of the degree has been greatly impaired by the fact that many of the colleges confer it as an honorary doctorate. To such an extent has this custom spread that the American Philological Association, at a meeting in Cincinnati, Ohio, July, 1881, adopted the following resolution:

> Whereas many colleges in the United States have in recent years conferred the degree of doctor of philosophy, not by examination, but *honoris causa:* Be it
> *Resolved*, That this association deprecates the removal of this degree from the class to which it belongs (namely, B. D., LL. B., M. D., and Ph. D., degrees conferred after examination), and its transfer to the class of honorary degrees.

This resolution was concurred in by the American Association for the Advancement of Science, at its meeting, held in Cincinnati, August, 1881.

The following table, compiled from the annual reports of the Bureau from 1873 to 1890, shows the number of honorary Ph. D. degrees conferred and the number of institutions so conferring the degree:

[1] See p. 756.

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Year	Number of colleges conferring Ph. D.	Number of honorary Ph. D.'s conferred.	Year.	Number of colleges conferring Ph. D.	Number of honorary Ph. D.'s conferred.	Year.	Number of colleges conferring Ph. D.	Number of honorary Ph. D.'s conferred.
1873	12	17	1878	21	31	1884	26	36
1874	10	15	1879	18	33	1885	19	25
1875	12	19	1880	19	20	1886	18	22
1876	20	26	1881	29	49	1888	.....	29
1877	14	19	1882	21	30	1889	31	50

From this table it would appear that the protest from the above-named societies had a temporary effect, as both the number of honorary Ph. D. degrees conferred and the number of colleges conferring the degree was considerably less in 1882 than in 1881; but, though the number of such degrees conferred in succeeding years fluctuates considerably, there does not seem to be any tendency to abolish the custom, as will be seen by looking at the last year of the above table. During this year both the number of degrees conferred and the number of schools conferring them exceeded the numbers of any previous years.

The custom is opposed by many colleges. President Pepper, in his annual report to the board of trustees of Colby University in 1887, says:

"The faculty desire respectfully through this report to express to the board their conviction that the degree of Ph. D. should never be conferred as an honorary degree, but only, as is now the custom in the best colleges and universities, on those who by completing courses of study prescribed by the faculty under conditions also prescribed, shall merit the degree. It seems to the faculty that Colby, in consistency with its past history, should do nothing to lower, but everything to maintain or raise, the value of the symbols of scholarship."

That this recommendation was adopted is shown in the report of President Small for 1890, which contains the following statement:

"The faculty wish to express their gratification that the trustees voted at their last annual meeting to adopt the recommendation made in 1887 by Dr. Pepper, with reference to the degree of doctor of philosophy. * * * The ground upon which the faculty based their support of Dr. Pepper's recommendation was that the degree referred to had a distinct meaning abroad, and that the leading universities of this country had attempted to reserve it for the same use in the United States. The degree is intended not as a distinction for men who have shown marked ability, or performed conspicuous service, but it is now used as a certification that, in addition to college instruction, the person upon whom it is conferred has had at least three years of university training in the processes of original investigation, and has proved his right to recognition as a 'master workman' by university examination and the publication of some results of original research." He also says: "It is also manifestly improper for an institution to grant that degree when it makes no pretension of furnishing the training which qualifies for it."

The sentiment here expressed by Dr. Small seems to be shared by the authorities of Rock Hill College, in the catalogue of which the following appears:

"Application is sometimes made to the college for the degree of doctor of philosophy. This of all degrees ought to be the reward of high merit, whether for work actually done in the field of philosophy or for an examination rigidly gone through before a faculty of philosophy. It is not within the scope of a faculty of science or a faculty of arts to pass upon this degree. It can be legitimately conferred only by a university having a school and faculty of philosophy. Proceeding from any other source it is valueless and misleading."

If this sentiment was shared by a large number of the institutions which confer the Ph. D. as an honorary degree the evil would be rapidly diminished, but so long as a few of our leading universities persist in this custom it is not to be supposed that the smaller colleges will drop it.

Many of those who receive this degree for work done at some of the leading institutions make it a practice to write after the degree either the name or an abbreviation of the name of the institution by which the degree was conferred. If this practice were more generally followed by people who earn the degree it might have some effect upon those colleges who do not provide courses of study leading thereto.

II.—Summary of statistics.

The following table gives a summary by States of some of the more important statistics of universities and colleges for the year 1889-90:

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States and Territories.	Number of institutions.	Professors and instructors.						Students.										
		Preparatory departments.	Collegiate departments.	Professional departments.	Total number.			Preparatory departments.		Collegiate departments.		Graduate departments.		Professional departments.		Total number in all departments.		
					Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
North Atlantic Division:																		
Maine	3	0	38	15	53	0	53	0	0	415	61	0	0	93	0	508	61	569
New Hampshire	1	0	19	15	47	0	47	0	0	256	0	0	0	74	0	417	0	417
Vermont	2	0	24	21	51	0	51	0	0	157	29	0	0	201	0	503	29	532
Massachusetts	9	11	215	89	498	5	503	112	.....	2,552	177	259	24	1,066	53	(40) 4,178	256	4,474
Rhode Island	1	0	22	0	22	0	22	0	0	276	0	9	0	0	0	285	0	285
Connecticut	3	0	85	58	182	0	182	0	0	1,078	21	87	0	301	0	1,793	53	1,846
New York	22	(10) 96	387	254	785	11	796	2,261	111	4,262	343	356	35	2,350	6	9,850	680	10,530
New Jersey	4	4	86	1	91	0	91	52	0	955	0	118	0	2	0	1,141	0	1,141
Pennsylvania	27	(31) 78	287	168	506	41	547	(57) 1,454	444	2,871	(247) 267	136	10	1,246	1	(574) 5,711	856	7,141
South Atlantic Division:																		
Delaware	1	0	8	0	8	0	8	0	0	82	0	0	0	0	0	82	0	82
Maryland	10	42	141	6	174	20	194	466	81	746	85	230	6	27	0	1,592	231	1,823
District of Columbia	4	43	50	84	107	11	178	286	2	289	28	0	0	818	17	1,437	89	1,576
Virginia	8	7	72	13	104	3	107	93	5	1,029	13	17	0	321	0	1,426	18	1,444
West Virginia	3	10	21	2	27	2	29	(20) 168	10	(140) 64	1	.....	.....	10	0	(164) 252	11	427
North Carolina	10	(21) 11	57	18	91	10	101	387	192	949	96	14	0	165	0	1,561	393	1,954
South Carolina	9	22	65	13	86	7	93	363	50	586	1	18	1	85	0	1,229	255	1,484
Georgia	7	35	50	21	75	26	101	489	433	600	39	1	0	169	0	1,259	472	1,731
Florida	4	16	18	.....	16	16	32	125	143	44	37	.....	.....	.....	.....	169	180	349
South Central Division:																		
Kentucky	14	(4) 34	90	28	130	35	165	545	209	996	200	4	0	186	0	2,750	608	3,358
Tennessee	20	(26) 63	113	127	270	39	309	1,355	585	1,373	179	24	0	1,087	2	3,980	931	4,911
Alabama	6	10	42	3	69	6	75	359	370	691	21	4	0	46	0	1,100	391	1,491
Mississippi	6	8	20	1	39	21	60	322	02	407	134	11	2	16	0	926	426	1,352
Louisiana	12	(10) 83	94	41	166	55	221	1,423	1,019	663	236	14	0	489	0	2,899	1,496	4,395
Texas	11	27	70	4	89	39	128	693	394	916	342	4	3	88	0	(469) 1,831	954	3,254
Arkansas	4	1	4	.....	(3) 16	9	28	90	28	8	7	1	0	44	0	(295) 236	96	627

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North Central Division:																
Ohio	37	(41) 156 | 211	117	530	127	657	2,965	1,157	2,540	1,121	174	24	1,088	6	(283) 7,504 | 3,461	11,248
Indiana	14	(24) 62 | 120	22	228	29	257	(54) 1,107	414	(26) 1,456	343	(3) 40	6	225	8	(112) 3,036 | 909	4,057
Illinois	28	(18) 147 | 211	156	482	102	584	(92) 2,287	971	(38) 1,652	670	35	16	1,754	13	(1929) 6,049 | 1,972	9,950
Michigan	11	(25) 32 | 126	52	209	44	253	925	495	1,278	608	61	24	1,190	90	(72) 3,522 | 1,437	5,061
Wisconsin	8	(22) 19 | 104	15	137	19	156	517	182	942	282	12	11	268	5	1,804 | 512	2,316
Minnesota	9	(27) 10 | 52	90	176	16	192	483	306	645	262	45	26	330	11	1,701 | 674	2,375
Iowa	21	(34) 97 | 157	95	276	100	376	1,589	1,164	1,212	676	24	11	539	29	(988) 3,346 | 1,879	6,213
Missouri	27	(38) 107 | 159	56	327	90	417	(142) 1,622	926	(44) 1,538	684	10	8	478	0	(325) 4,378 | 1,851	6,554
North Dakota	2	(18)	------	14	4	18	68	65	17	9	0	0	0	0	125 | 138	263
South Dakota	5	(17) 8 | 25	------	39	22	61	258	187	74	55	4	------	------	------	492 | 488	980
Nebraska	7	(32) 24 | 45	1	72	19	91	323	187	342	129	19	3	8	0	743 | 444	1,187
Kansas	15	(23) 73 | 96	20	178	44	222	1,493	849	586	222	10	7	150	3	(560) 2,372 | 1,326	4,258
Western Division:																
Montana	1	2 | 6	0	6	2	8	37	29	4	10	0	0	0	0	41 | 39	80
Wyoming	1	------	------	5	7	12	12	32	5	4	------	------	------	------	35 | 45	80
Colorado	4	(16) 24 | 19	41	78	18	96	(139) 126 | 67		77	42	4	3	17	6	(853) 224 | 118	1,195
New Mexico	1	7	------	2	5	7	88	77	------	------	------	------	------	------	88 | 77	165
Utah	1	10	9	19	1	20	191	112	49	30	------	------	------	------	228 | 129	357
Nevada	1	2 | 8	------	8	2	10	40	47	24	26	------	------	------	------	64 | 73	137
Washington	3	(10) 9 | 9	------	13	11	24	190	182	31	26	------	------	------	------	241 | 233	474
Oregon	6	(4) 10 | 27	47	71	18	89	284	198	198	103	------	------	102	9	(20) 616 | 446	1,062
California	12	(12) 31 | 124	61	200	47	247	1,067	381	856	228	22	8	309	10	(342) 2,292 | 702	3,336
North Atlantic Division	72	(41) 189 | 1,163	621	2,235	57	2,292	(57) 3,879	555	(247) 12,822	898	965	69	5,353	60	(614) 24,386 | 1,935	26,935
South Atlantic Division	56	(21) 186 | 482	157	748	95	843	(20) 2,377	916	(140) 4,389	300	280	7	1,595	17	(164) 9,057 | 1,649	10,870
South Central Division	73	(40) 226 | 443	204	(3) 779	204	986	4,787	2,667	5,054	1,119	62	5	1,966	2	(764) 13,722 | 4,902	19,388
North Central Division	184	(319) 735 | 1,336	624	2,668	616	3,281	(288) 13,637	6,983	(108) 12,232	5,061	(3) 434	136	6,030	165	(4,269) 35,072 | 15,141	54,482
Western Division	30	(42) 95 | 202	149	402	111	513	(139) 2,035	1,125	1,244	469	26	11	428	25	(1,215) 3,829 | 1,862	6,906
Total	415	(463) 1,431 | 3,626	1,755	(3) 6,832	1,063	7,918	(504) 26,715	12,196	(495) 35,791	7,847	(3) 1,767	228	15,342	269	(7,026) 86,666 | 25,489	118,581

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TABLE 1.—*Summary of statistics of universities and colleges for 1889-90*—Continued.

States and Territories.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Number of volumes in libraries.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of productive funds.	Income from productive funds.	Receipts from tuition fees.	State or municipal appropriations.	Total income.	Benefactions.
1	20	21	22	23	24	25	26	27	28	29	30	31
North Atlantic Division:												
Maine	4		78	76,614	$80,000	$650,000	$1,245,000	$64,591	$30,395		$94,986	$31,150
New Hampshire	10			70,000								
Vermont	5	0	143	56,000	125,000	375,000	529,436	22,501	5,383	$8,400	48,003	121,050
Massachusetts	48	49	627	547,100	1,020,000	5,013,000	10,641,083	576,304	438,931		1,424,872	807,813
Rhode Island	3		100	68,000		625,000	980,836					
Connecticut	42	7	116	269,698	109,630	1,400,000	4,710,811	232,682	235,821	0	496,096	567,453
New York	42	38	476	504,005	2,005,733	7,659,374	16,362,158	860,354	542,434	149,118	1,738,757	682,268
New Jersey	10	12	78	93,262	51,200	495,000		39,400	14,000		58,100	
Pennsylvania	54	12	398	320,986	619,300	5,599,000	4,686,241	264,566	332,872	0	639,130	522,325
South Atlantic Division:												
Delaware	0	0	30	4,100	6,000	75,000	83,000	4,980	360		7,140	
Maryland	3	21	143	95,700	204,050	1,449,900	3,035,000	52,250	100,222	14,675	168,127	123,329
District of Columbia	1		78	68,000	30,000	1,000,000	430,000	25,512	77,216	23,000	134,775	16,360
Virginia	21	1	67	116,900	340,800	1,681,100	1,391,048	77,116	80,540	40,000	222,431	154,000
West Virginia	3			9,200	20,200	236,000	188,150	11,409	5,500	25,000	41,909	15,100
North Carolina	2	2	20	73,500	131,000	827,500	357,806	25,271	46,454	20,125	111,049	160,000
South Carolina		1	9	47,800	39,000	600,000	203,000	16,580	28,360	53,050	123,040	6,215
Georgia	11			40,800	97,300	848,000	775,202	50,949	19,000	1,065	92,514	51,049
Florida				5,675	8,075	75,000	20,000	1,000	7,330		19,821	20,414
South Central Division:												
Kentucky	12	0	202	51,000	74,500	779,750	1,177,000	67,750	70,488	400	140,966	136,000
Tennessee	11	10	330	103,631	233,550	2,175,000	1,847,400	121,100	151,092	800	364,324	117,685
Alabama				25,700	60,500	922,000	325,000	25,500	22,784		82,524	12,600
Mississippi		1	7	25,000	58,550	409,500	574,000	33,743	22,034	300	64,247	25,000
Louisiana	0	0	173	97,376	89,950	1,131,533	1,616,313	105,255	76,778	17,500	209,883	142,395
Texas	4	0	15	19,937	61,081	832,800	662,000	43,800	65,856	12,500	139,228	32,244
Arkansas				1,950	740	103,000			10,031		13,181	
North Central Division:												
Ohio	41	3	447	285,713	478,953	5,001,235	5,072,062	284,904	222,273	126,600	738,344	361,737
Indiana	17		158	121,520	217,300	2,025,000	1,711,129	99,253	100,154	23,000	232,241	178,000
Illinois	15		465	190,375	270,800	3,187,825	3,849,569	203,411	213,990	46,044	628,018	263,278
Michigan	36	1	4	137,989	675,527	1,694,865	1,508,062	103,724	154,053	194,820	500,133	179,399
Wisconsin	11	9	78	90,180	214,663	2,418,500	891,516	63,092	61,613	112,570	315,160	235,355
Minnesota	9	3	57	49,839	219,138	2,437,824	1,324,876	63,537	41,613	65,000	228,749	121,802
Iowa	23		157	97,156	126,225	1,664,000	1,231,714	81,043	136,218	54,000	328,101	401,200
Missouri	17	2	202	135,682	236,550	2,381,000	1,975,207	119,938	237,905	34,400	399,213	73,042
North Dakota	0	0	1	3,500	10,000	180,000	25,000	3,000	1,800	23,400	32,100	30,025
South Dakota	0	0	11	9,800	29,720	355,000	11,000	1,000	6,500	36,350	52,035	34,200
Nebraska	6	0	40	22,104	71,000	1,043,000	1,236,700	48,710	18,204	80,000	145,546	63,089

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Kansas	3		2	57,741	175,300	1,762,050	463,500	26,917	81,172	72,125	244,549	114,338
Western Division:												
Montana	0	0	1	1,200	1,500	113,000	3,000	3,000	2,874		10,238	25,000
Wyoming				1,500	3,000	150,000						
Colorado	0	0	3	18,040	23,800	1,700,000	354,000	900	3,950		62,000	122,000
New Mexico	0	0	0	0	0	5,500	0	0	1,188	0	2,688	1,500
Utah				3,500	25,000	240,000			5,634	28,750	39,384	
Nevada				3,000	1,000	150,000	91,000			28,000	28,000	
Washington			8	6,650	3,850	578,000	12,000	1,400	10,400	5,000	16,800	4,800
Oregon		0	44	16,700	13,200	302,000	237,000	14,249	24,727	11,277	50,744	13,100
California	4	0	7	102,930	372,700	1,909,088	2,282,596	125,392	61,835	96,348	312,772	39,500
North Atlantic Division	218	118	2,016	2,005,665	4,010,863	21,816,374	39,155,565	2,060,398	1,599,836	157,518	4,499,944	2,732,003
South Atlantic Division	41	25	347	461,675	876,425	6,791,500	6,483,206	263,067	364,982	176,915	920,806	546,967
South Central Division	27	11	727	324,594	578,871	6,353,563	6,201,713	397,148	419,063	31,500	1,014,253	465,924
North Central Division	178	18	1,622	1,201,599	2,725,176	24,150,299	19,300,335	1,098,529	1,270,495	868,809	3,844,189	2,055,630
Western Division	7	0	63	158,520	444,050	5,147,588	2,929,596	144,941	110,608	171,375	522,626	205,900
Total	471	172	4,775	4,152,053	8,635,385	64,259,344	74,070,415	3,966,083	3,764,984	1,406,117	10,801,918	6,006,474

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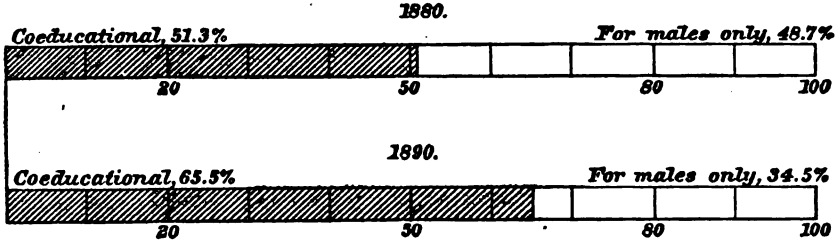
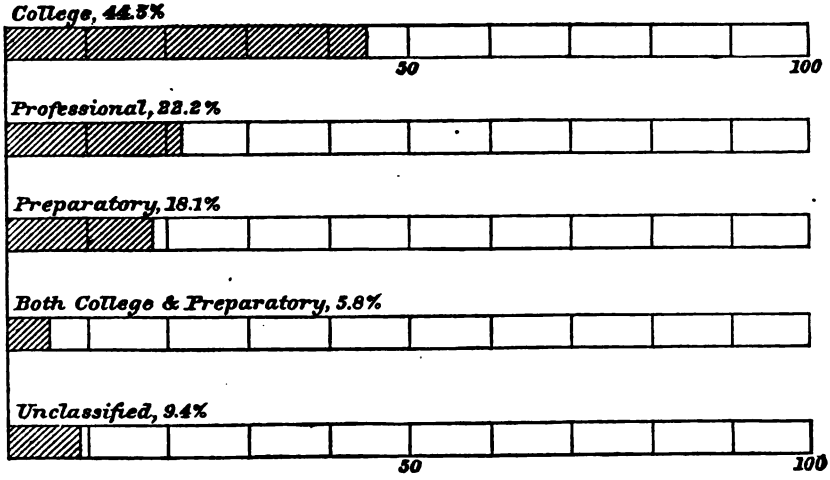
Coeducation.—The fact that increasing attention is being bestowed upon the higher education of women is apparent not only from the number of colleges for women that are constantly being established, but from the number of institutions that are continually removing the barriers against the admission of women to their privileges. The great advance that has been made in this direction during the past ten years may be graphically presented by means of the following diagram. This shows the ratio of coeducational institutions to the total number of colleges and universities (excluding colleges for women) for the years 1880 and 1890:



I.—Diagram showing the ratio of coeducational colleges to the total number of colleges (excluding colleges for women).

Teaching force.—The total number of professors and instructors employed in the 415 institutions during the year under consideration was 7,918. This number includes the instructors in all the departments of the institutions. The distribution of instructors among the several departments is shown by the following diagram:



II.—Diagram showing the distribution of professors and instructors among the several departments of colleges and universities.

From this representation it will be seen that a little more than half the total number of professors instruct in the collegiate department, counting those instructing in both collegiate and preparatory departments. Of the 7,918 professors and instructors reported 1,083 were women. The great majority of this number were engaged as instructors in music, art, and elocution, or as assistants to professors. An examination of the catalogues of the 272 coeducational institutions shows that in 134 of them women have charge of some regular college studies. This includes not only the cases where women have the title of "professor," but also cases where they are called "instructor," but have charge of the subject specified. Nearly all of the coeducational institutions have women in their

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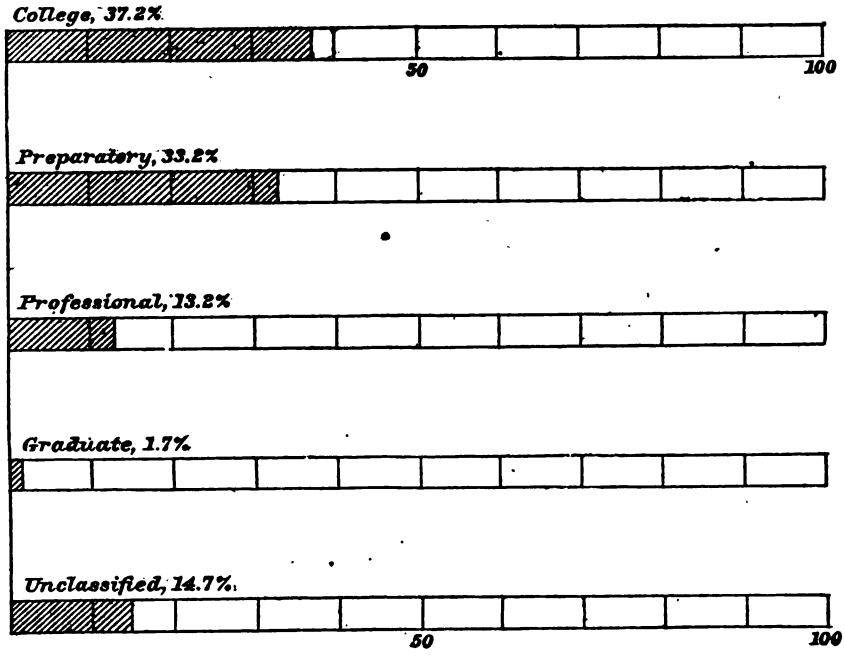
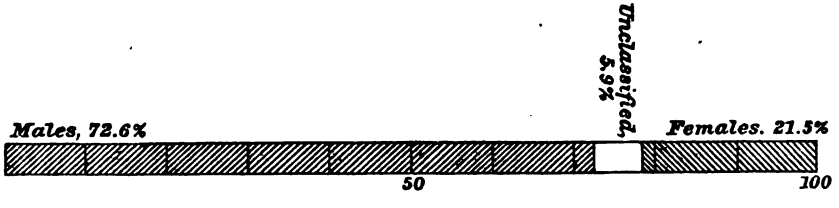
corps of instructors, but, as said before, the large majority of these are engaged as assistants or as instructors in music, art, etc. The same investigation also showed that 24 of the coeducational institutions have women as members of their boards of trustees.

Students.—The distribution of the 118,581 students among the several departments is shown in the following diagram:



III.—Diagram showing the distribution of students among the several departments of colleges and universities.

The graduate students form a very small percentage of the total number, notwithstanding the remarkable increase in this respect during the past twenty years.[1] As would naturally be expected, much the larger proportion of all the students are males, though this ratio is being constantly decreased. The accompanying diagram shows the proportion of males and females reported in all departments of colleges and universities:



IV.—Diagram showing the sex of students in all departments of colleges and universities.

Taking only the regular college students—that is, students pursuing undergraduate college courses, we find that the proportion of males is larger than when the students in all departments are considered. The total number of stu-

[1] See p. 819.

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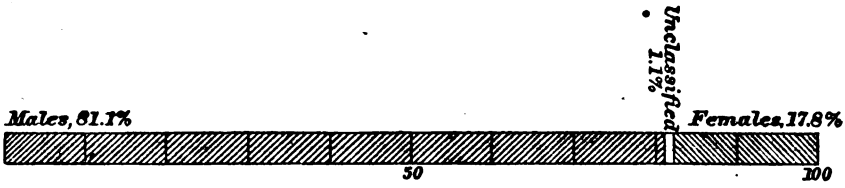
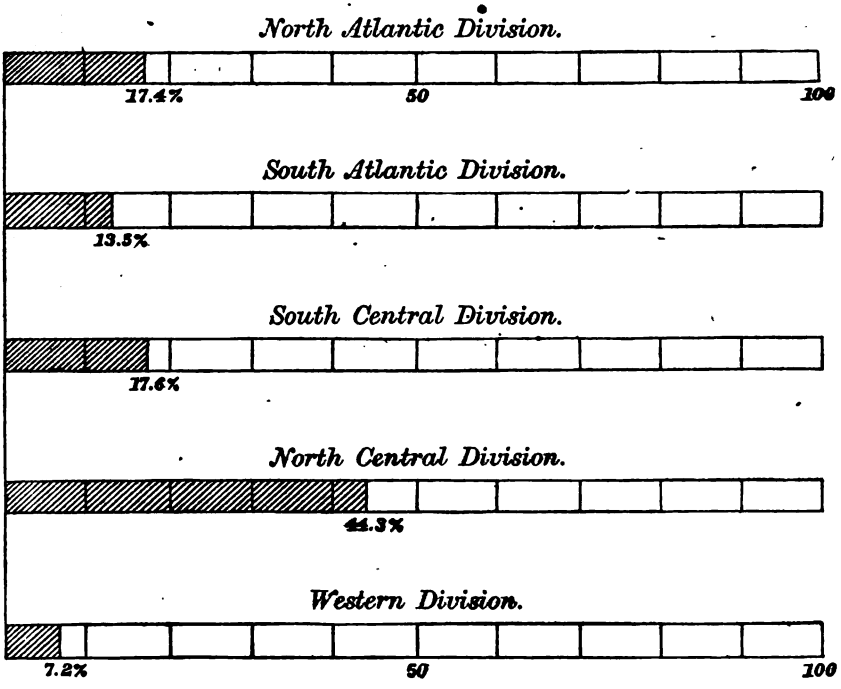
dents reported as being in the collegiate departments was 44,133, and the classification according to sex is given in the following diagram:



V.—Diagram showing the sex of students in collegiate departments.

Location of institutions.—The distribution of colleges among the several geographical sections of the United States is shown in the following:



VI.—Diagram showing the distribution of 415 colleges and universities among the several geographical divisions of the United States.

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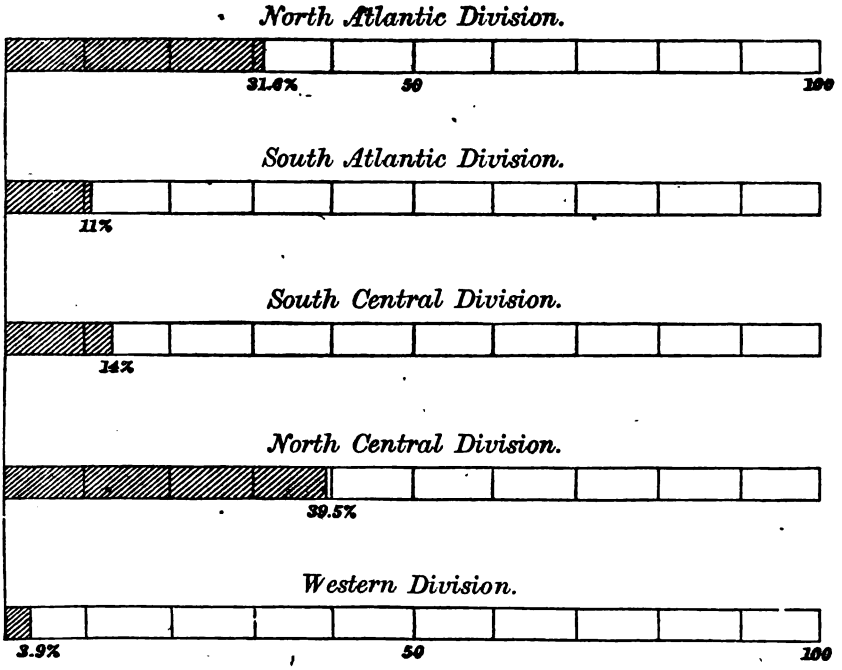
Distribution of college students.—The proportion of regular college students enrolled in the several divisions is shown in Diagram VII.



VII.—Diagram showing the distribution of regular college students among the several geographical divisions.

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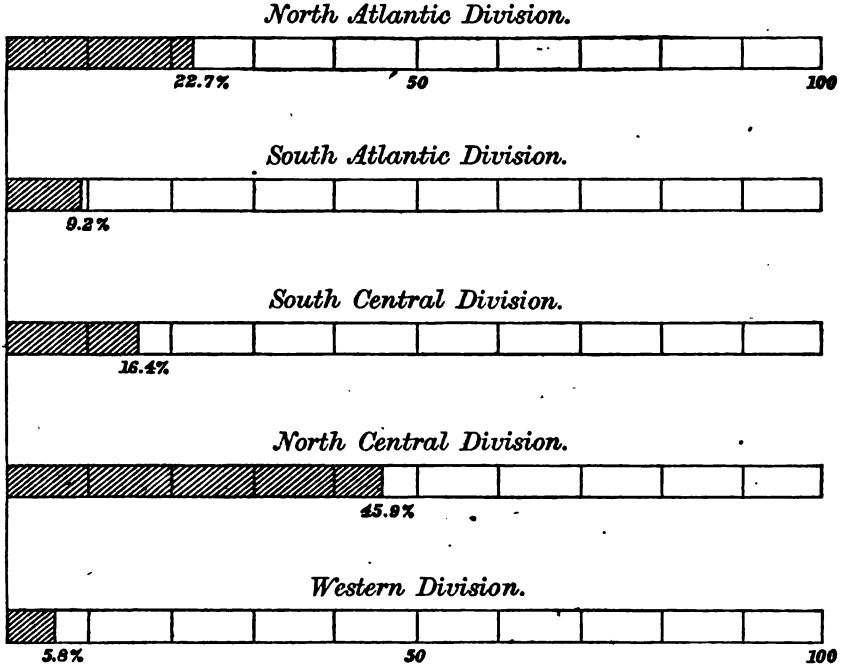
Comparing Diagrams VI and VII it will be seen that the North Atlantic Division is the only one in which the proportion of college students is greater than the proportion of institutions. This is somewhat changed when we consider the students in all the departments, the distribution of which is as follows:



VIII.—Diagram showing distribution of total number of students among the several geographical divisions.

Comparing the above diagram with Diagram VI we find that in this case both the North Atlantic and North Central Divisions have a larger proportion of students than institutions. With respect to the North Central Division this fact is due to the large number of preparatory students. Nearly 53 per cent. of the total number of such students reported are found in this section—*i. e.*, the North Central. Here also are found a large number of students in business, music, and art departments. In the North Atlantic Division the proportion of preparatory students is comparatively small. This is especially the case in the New England States, where the total number, 112, is reported by one institution. The excellent secondary schools maintained by this section of the country relieve the colleges and universities of preparatory work, thus allowing their entire resources to be devoted to higher education. Preparatory departments in other sections of the country are being abolished as fast as the high schools attain a standard which will allow such action to be taken.

Income.—The sources from which colleges and universities draw their annual income forms another interesting subject for investigation. The total income reported for 1889-90 was $10,801,918, derived from tuition fees, productive funds, State or municipal appropriations, and from miscellaneous sources. The ratio which the income derived from each of these sources bears to the total income is shown in the following diagram:

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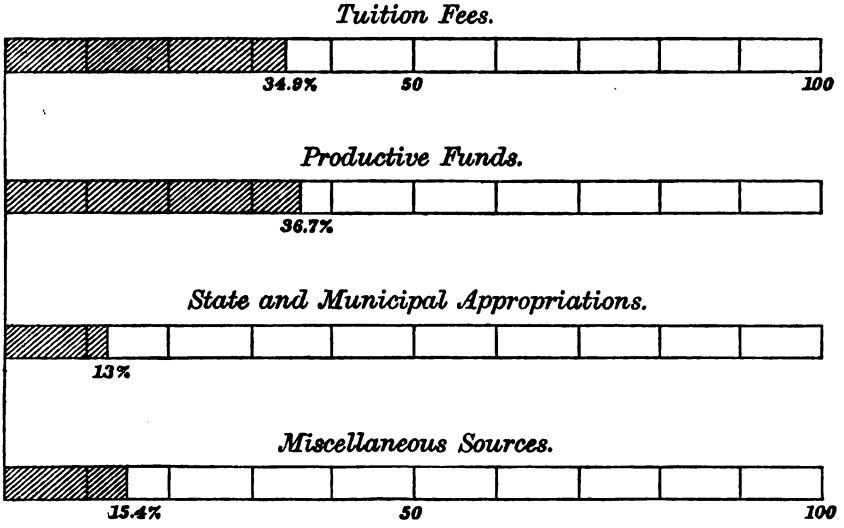
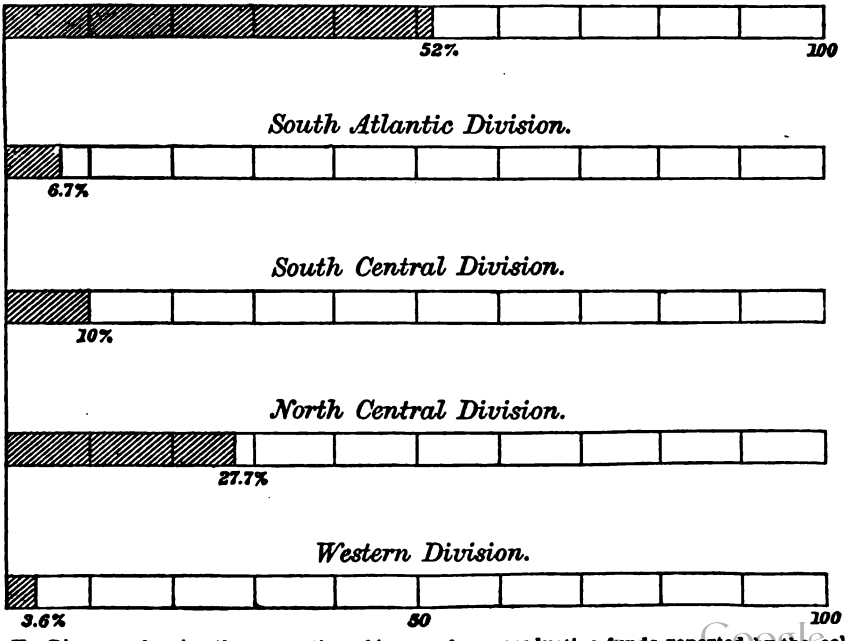


IX.—Diagram showing the sources of income of colleges and universities.

As would be expected, the amount of income derived from productive funds is greater than that from any other source, while the amount derived from tuition fees is but a little more than one-third of the total. As institutions supported by tuition fees nearly always expend their total annual income the small proportion of the cost of college education paid by students is again forcibly brought out. The inference is that vigorous institutions for higher education can not be self-supporting, but must receive aid from sources other than tuition fees.

The income derived from permanent funds was $3,966,083, distributed among the several geographical divisions as follows:



X.—Diagram showing the proportion of income from productive funds reported by the colleges and universities of the several geographical divisions.

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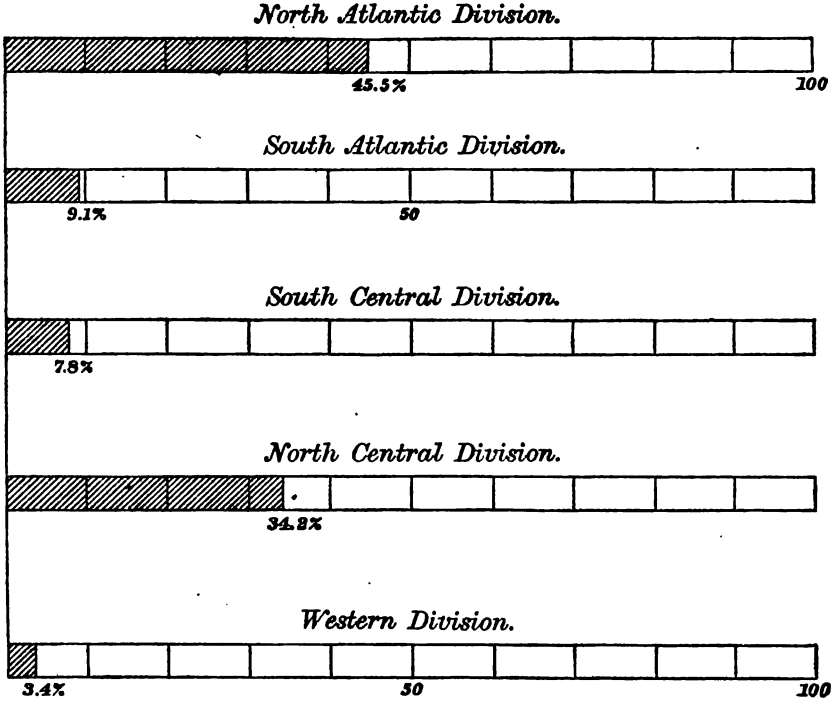
Comparing diagram VI (p. 766), showing the ratio of institutions in the several divisions with the above diagram, it will readily be seen that the institutions of the North Atlantic Division are more generously endowed than those of the other divisions of the country. The institutions in this section are, comparatively speaking, old institutions with well-established reputations, having alumni scattered throughout the entire country. The rich man with money to give for educational purposes naturally turns to his *alma mater*, and, if he is not a college graduate, he designates an institution or institutions with well-established reputations. Thus the older institutions are constantly receiving large and numerous benefactions. The gifts and bequests to colleges and universities amounted in 1889–90 to $6,006,474, the distribution of which is shown in the following diagram:



XI.—Diagram showing the proportion of benefactions received by the colleges and universities of the several divisions.

The institutions of the North Atlantic Division received, as will be seen, 45.5 per cent of the total amount. The advantages possessed by this division in the matter of productive funds and benefactions are somewhat offset in some of the other divisions by State appropriations for current expenses.

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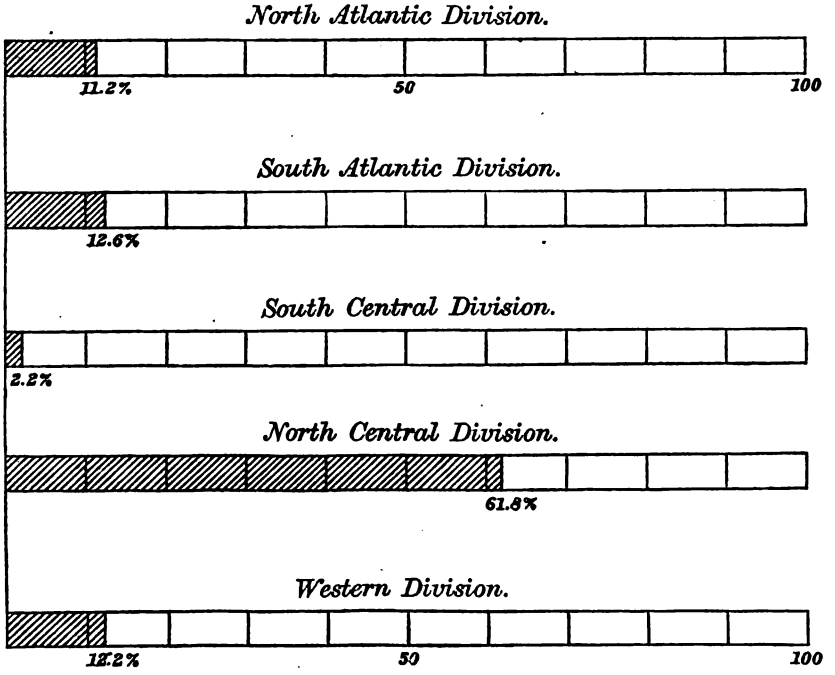
The total amount of State or municipal appropriations in 1889–90 amounted to $1,406,117, distributed as follows:



XII.—Diagram showing the proportion of State or municipal appropriations received by the colleges and universities of the several divisions.

The North Atlantic Division reports 11.2 per cent of the appropriations here considered. Nearly the whole of this was received by the College of the City of New York from the city of New York, which it serves as a high school. The North Central Division reports 61.8 per cent of the total. In this division State universities have met with considerable favor, and the States have, as a rule, dealt with them very generously. It will also be seen that although nearly all the States comprising the South Central Division have State universities, the amount appropriated for their support was exceedingly small. They depend chiefly for their support upon students' fees and the income from productive funds. In a large number of the State universities tuition is free to residents of the State, and in the few cases where tuition is not free the charges have been made as low as the resources of the institutions would allow.

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III.—Distribution of students in degree courses.

Table 2, page 773, presents, in a form convenient for comparison, the distribution of undergraduate students in the several degree courses for the successive years from 1886–87 to 1889–90. During the past few years the statistics necessary for the compilation of this summary have been given by the different institutions with a marked degree of accuracy and in considerable detail, thus enhancing the value of this representation.

The summary furnishes an indication of the trend of college education, which is virtually determined by the relative predominance of different courses of study for a period of time.

From an examination of the statistics included in this table it appears that the ratio of students in what is known as the classical or A. B. course is slightly decreasing. The greatest decrease is shown in the South Central Division, where the ratio in the classical or A. B. course has dropped from 59 per cent in 1886–87 to 47.9 per cent in 1889–90. It will also be seen that the South Atlantic Division continues to draw a larger ratio of its students to the A. B. course than any other section of the country. The movement here indicated, *i. e.*, the decrease of students in the A. B. course, will not be a surprise to anyone who has studied the subject of collegiate education in America during recent years. The colleges and universities of the country are continually forming new courses of study for which evidently there is a demand. But, notwithstanding the multiplication of courses leading to degrees other than the A. B., the number of students pursuing the A. B. course is still greater than the sum of all the students pursuing other degree courses.

The degree of A. B. does not at present necessarily imply that its possessor has acquired a classical education, for there are institutions that confer this degree on the completion of courses of study in which neither Latin nor Greek are included.

It is a matter of great regret that statistics showing the classification of students by courses for a long period of years can not be obtained. In making comparisons the data used should be for at least a period of ten years, so that temporary fluctuations of any sort whatsoever would be avoided. But, since such complete data do not exist, the reader and investigator must content himself with the briefer record.

A glance at the statistics will show that the percentage of students pursuing regular degree courses has increased with considerable regularity since 1886-87, the time when these statistics were first collected. It will also be noted that it is in the older portions of the country, the North and South Atlantic Divisions, in which the classical course has the deepest hold upon college students, while in the more recently settled regions more attention is given to the sciences and courses of study in which the ancient classics seldom find a place.

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TABLE 2.—*Distribution of college students in the regular degree courses from 1886–87 to 1889–90.*

States.	1886–87.							1887–88.						1888–89.								1889–90.							
	No. of colleges reporting.	No. of undergraduates.	Per cent in regular courses.	Per cent of students in regular courses reported in—				No. of colleges reporting.	No. of undergraduates.	Per cent in regular courses.	Per cent of students in regular courses reported in—			No. of colleges reporting.	No. of undergraduates.	Per cent in regular courses.	Per cent of students in regular courses reported in—					No. of colleges reporting.	No. of undergraduates.	Per cent in regular courses.	Per cent of students in regular courses reported in—				
				Classical course.	Scientific course.	Both classical and scientific courses.	Other first-degree courses.				Classical course.	Scientific course.	Other first-degree courses.				A. B. course.	B. S. course.	B. L. course.	Ph. B. course.	C. E. course.	Other first-degree courses.				A. B. course.	B. S. course.	B. L. course.	Ph. B. course.	C. E. course.	Other first-degree courses.
United States	360	41,906	60	62	22	8	8	324	33,038	65	62	20	18	263	26,115	83	62	19	6	9	2	2	323	37,164	84.6	57.8	19.9	7.1	8.1	3.3	3.3
North Atlantic Division	65	10,541	87	77	19	1	3	62	10,366	82	78	15	7	47	8,489	80	81	10	1	5	2	1	57	12,584	89.3	70.7	12.0	1.7	5.4	5.2	5.0
South Atlantic Division	50	4,552	51	81	10	9	0	45	3,705	60	78	7	15	37	2,911	72	82	7	2	7	2	....	43	3,600	82.4	77.3	12.3	2.3	5.3	2.8	.....
South Central Division	66	7,070	38	59	31	8	2	49	3,961	45	54	27	19	31	2,282	77	57	27	9	1	4	2	50	4,556	75.9	47.9	31.4	8.2	3.2	5.1	4.2
North Central Division	152	17,142	60	46	25	12	17	143	13,427	63	47	25	28	126	10,995	83	44	(1) 26	11	12	2	4	154	15,207	83.6	45.3	25.5	12.8	11.3	2.7	2.4
Western Division	27	2,601	28	43	25	23	9	25	1,579	36	32	39	29	22	1,438	75	48	26	5	20	1		19	1,217	87.8	48.1	20.4	5.7	21.3	2.4	1.1
North Atlantic Division:																															
Maine	3	393	100	100	0	0	0	3	432	57	100	0	0	3	441	99	100	....	....	....	....	....	3	476	99.2	100.0	.....	.....	.....	.....	.....
New Hampshire	1	249	100	100	0	0	0	1	229	100	100	0	0	1	229	99	80	....	20	....	....	....	1	256	94.1	78.8	.....	21.2	.....	.....	.....
Vermont	2	213	94	60	24	0	16	3	203	91	64	4	32	2	186	96	63	7	....	17	13	....	2	186	96.8	59.4	12.8	.....	13.3	14.5	.....
Massachusetts	6	2,114	91	97	3	0	0	7	2,279	78	97	1	2	5	2,133	89	99	....	....	1	....	....	7	2,729	89.8	96.9	1.1	.....	.4	.5	1.1
Rhode Island	1	241	100	100	0	0	0	1	255	94	81	....	19	1	208	93	81	....	....	19	....	....	....	....	....	....	....	....	....	....	....
Connecticut	3	866	99	91	9	0	0	3	913	96	90	5	5	2	349	96	71	16	....	13	....	....	3	1,099	98.9	91.0	5.3	.....	3.7	.....	.....
New York	20	2,741	79	64	29	5	2	17	2,486	82	68	25	7	14	2,206	81	79	11	2	7	....	1	18	4,072	86.6	52.9	12.9	3.3	9.4	9.5	12.0
New Jersey	4	626	88	86	14	0	0	4	784	85	77	18	5	2	681	91	85	8	....	....	7	....	2	838	89.6	73.4	18.1	.....	.....	7.2	1.3
Pennsylvania	25	3,098	83	61	34	0	5	23	2,785	80	62	25	13	17	1,996	92	61	22	1	7	6	3	21	2,928	86.4	55.1	25.9	.8	8.0	6.1	4.1

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TABLE 2.—*Distribution of college students in the regular degree courses from 1886-87 to 1889-90*—Continued.

States.	1886-87.							1887-88.						1888-89.									1889-90.							
	No. of colleges reporting.	No. of undergraduates.	Per cent in regular courses.	Per cent of students in regular courses reported in—				No. of colleges reporting.	No. of undergraduates.	Per cent in regular courses.	Per cent of students in regular courses reported in—			No. of colleges reporting.	No. of undergraduates.	Per cent in regular courses.	Per cent of students in regular courses reported in—						No. of colleges reporting.	No. of undergraduates.	Per cent in regular courses.	Per cent of students in regular courses reported in—					
				Classical course.	Scientific course.	Both classical and scientific courses.	Other first-degree courses.				Classical course.	Scientific course.	Other first-degree courses.				A. B. course.	B. S. course.	B. L. course.	Ph. B. course.	C. E. course.	Other first-degree courses.				A. B. course.	B. S. course.	B. L. course.	Ph. B. course.	C. E. course.	Other first-degree courses.
South Atlantic Division:																														
Delaware																							1	82	98.8	79.0	10.0	.....	.....	11.0	.....
Maryland	9	957	66	95	5	0	0	8	688	40	76	3	21	6	571	63	85	4	10	.....	1	.....	8	771	75.7	91.1	1.0	5.8	.....	2.1	.....
District of Columbia	5	367	35	100	0	0	0	5	331	57	97	2	1	4	185	94	96	2	1	1	.....	.....	4	317	66.2	77.1	14.3	.....	.....	8.6	.....
Virginia	7	688	38	84	16	0	0	6	706	55	91	9	.....	4	515	53	87	9	1	.....	3	.....	3	347	79.8	88.8	6.5	.....	.....	4.7	.....
West Virginia	3	135	49	9	0	91	0	2	114	8	100	.....	.....	2	106	17	22	.....	.....	.....	78	.....	2	146	75.3	37.3	14.5	29.1	19.1	.....	.....
North Carolina	9	1,230	44	55	18	27	0	10	942	66	60	15	25	7	660	70	81	3	.....	16	.....	.....	7	748	88.1	60.5	24.0	.6	14.3	.6	.....
South Carolina	8	539	61	89	10	0	1	8	467	71	94	3	3	7	438	94	81	16	.....	3	.....	.....	7	469	90.0	78.9	17.1	.....	3.8	.2	.....
Georgia	7	600	57	91	9	0	0	5	456	93	74	1	25	5	394	93	71	6	.....	18	5	.....	7	689	89.8	81.2	9.6	.....	4.5	4.7	.....
Florida	2	36	81	69	31	0	0	1	2	100	100	.....	.....	2	42	100	100	.....	.....	.....	.....	.....	4	81	63.0	98.0	2.0	.....	.....	.....	.....
South Central Division:																														
Kentucky	15	1,562	41	50	35	0	6	11	915	27	50	48	2	9	757	50	55	37	.....	1	.....	7	8	848	56.8	44.4	38.4	2.1	10.2	.....	4.9
Tennessee	19	1,892	46	71	29	0	0	14	1,181	50	49	26	25	6	417	90	47	32	10	1	10	.....	15	1,189	92.9	51.0	22.4	7.5	4.2	10.6	4.3
Alabama	5	544	42	48	52	0	0	4	456	64	71	11	18	2	306	93	87	.....	.....	.....	13	.....	6	712	73.0	60.6	28.4	.....	2.7	7.7	.6
Mississippi	4	403	48	47	39	0	14	4	364	28	82	12	6	2	136	100	65	26	9	.....	.....	.....	3	363	73.6	31.4	34.9	11.2	.....	.....	22.5
Louisiana	11	939	52	51	16	33	0	6	380	69	47	53	.....	5	265	72	41	32	27	.....	.....	.....	11	899	78.3	51.6	47.0	.....	.....	.....	1.4
Texas	8	1,458	16	58	20	13	0	7	627	40	45	2	53	4	367	80	49	25	21	5	.....	.....	6	542	69.6	31.3	21.2	42.2	.....	5.3	.....
Arkansas	4	272	9	0	0	100	0	3	38	63	63	33	4	3	34	88	67	33	.....	.....	.....	.....	1	3	100.0	33.3	.....	.....	66.7	.....	.....
North Central Division:																														
Ohio	34	3,486	64	56	17	0	27	31	3,198	64	46	13	41	26	2,535	90	52	14	5	15	2	12	31	3,135	90.8	48.4	14.0	17.5	16.7	2.5	.9
Indiana	14	1,750	79	53	22	13	12	13	1,517	58	63	24	13	9	891	86	68	23	1	7	.....	1	12	1,534	94.7	53.0	39.3	4.5	9.2	1.2	2.8

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Illinois	24	2,749	52	42	34	24	0	25	1,841	61	47	39	14	21	1,767	72	38 (6) 33		13	10	----	----	23	1,984	89.2	43.8	42.0	6.4	7.8	-----	-----
Michigan	9	1,907	47	40	22	0	38	7	1,216	80	39	18	43	6	1,182	86	32	25	17	26	----	----	8	1,705	60.9	31.5	13.9	17.1	20.1	7.4	10.0
Wisconsin	9	1,104	63	59	23	0	18	8	738	77	47	27	26	7	828	86	25	32	29	----	7	7	6	1,019	98.6	33.9	15.2	34.9	4.3	4.6	7.1
Minnesota	6	592	54	35	39	0	26	6	680	79	34	35	31	5	481	95	43	30	21	----	4	2	8	927	74.5	32.7	29.5	20.9	11.6	3.0	2.3
Iowa	20	2,176	56	43	45	0	12	19	1,456	76	35	37	28	19	1,565	89	30	38	9	18	5	----	18	1,731	92.0	30.5	40.5	8.4	16.0	4.4	.2
Missouri	17	1,921	64	28	15	57	0	15	1,534	30	64	26	10	15	851	63	71	25	----	2	1	1	21	1,743	61.0	70.5	17.6	2.1	5.5	.6	3.7
North Dakota	3	79	49	38	62	0	0	3	100	90	43	37	20	2	38	89	32	62	6	----	----	----	2	26	73.1	52.6	36.9	10.5	-----	-----	-----
South Dakota																							4	129	88.4	43.9	23.7	7.0	19.3	1.7	4.4
Nebraska	6	615	51	52	29	0	19	5	349	77	32	32	36	4	253	83	34	30	32	----	4	----	6	466	87.1	57.9	25.4	14.3	1.2	1.2	-----
Kansas	10	763	56	44	25	0	31	11	798	52	72	14	14	12	604	83	59	26	9	3	3	----	15	808	88.4	58.0	28.6	7.8	2.2	3.4	-----
Western Division:																															
Montana	1	35	71	44	56	0	0	1	30	----	----	----	----	1	32	84	34	33	----	----	33	- --	1	14	100.0	35.7	14.3	----	-----	50.0	-----
Wyoming	----	----	----	----	----	----	----	----	----	----	----	----	----	1	9	100	56	----	44	----	----	----	1	9	100.0	55.6	----	44.4	-----	-----	-----
Colorado	3	189	16	52	48	0	0	4	94	71	61	34	5	4	140	84	79	12	6	3	----	----	4	119	86.6	66.0	3.9	12.6	17.5	-----	-----
New Mexico	1	19	42	50	50	0	0	2	125	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----
Utah	1	349	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----
Nevada	----	----	----	----	----	----	----	----	----	----	----	----	----	1	43	100	44	56	----	----	----	----	1	50	100.0	50.0	20.0	-----	20.0	10.0	-----
Washington	2	150	35	50	50	----	----	2	78	100	36	59	5	2	165	35	39	56	5	----	----	----	1	31	100.0	35.5	64.5	-----	-----	-----	-----
Oregon	7	364	34	26	23	34	17	4	91	80	48	44	8	3	198	72	96	----	3	2	----	----	3	218	84.9	96.2	----	----	1.6	-----	2.2
California	12	1,495	33	45	19	25	11	11	1,162	35	25	36	39	10	851	80	33	29	5	32	1	----	8	776	87.1	34.6	26.9	6.5	29.0	2.0	1.0

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Degrees conferred in 1889-90.—The following table presents the summary, by States, of the number of different degrees conferred by 415 colleges and universities during the year 1889-90.

TABLE 3.—*Summary of degrees conferred by colleges and universities in 1889-90.*

| States. | Degrees conferred in course or on examination. | | |

| | | |

IV.—ENDOWMENT FUNDS OF COLLEGES AND UNIVERSITIES.

Although the number of colleges and universities in the United States is constantly increasing, both by the foundation of new institutions and by the development of institutions from secondary schools to colleges, this increase in the number of institutions has not thus far affected to any perceptible degree the increase in the endowment funds of the older institutions of the country.

The gifts of the people to higher institutions have been large and numerous and seem to be keeping pace with the increase in the population and wealth of the country. During the past few years a number of rich bequests have been made to old institutions, and also in not a few cases for the foundation of new institutions. The most notable of the latter are Clark University, Worcester, Mass., University of Chicago, Chicago, Ill., Catholic University, Washington, D. C., and Leland Stanford Jr. University, Palo Alto, Cal.

On account of the failure of a number of institutions to report to the Bureau from year to year a comparison between the total amounts of productive funds in 1880 and in 1890 would not show the true rate of increase in the funds during the last ten years.

The following tabular statement includes, first, only the institutions that reported on this subject in both 1880 and in 1890, and, second, all the institutions that reported in either year. From the first showing the average rate of increase may be inferred.

States.	Number of institutions.	Productive funds.		Increase.	1879-80.		1889-90.	
		1879-80.	1889-90.		Number of institutions.	Productive funds.	Number of institutions.	Productive funds.
				Per ct.				
United States	191	$37,726,501	$66,900,817	77.3	243	$43,168,270	315	$74,070,415
North Atlantic Division	42	19,279,002	37,970,113	97.0	51	23,739,371	54	39,156,565
South Atlantic Division	25	4,625,883	5,921,106	28.0	36	4,947,883	36	6,483,206
South Central Division	25	2,992,149	5,045,313	68.6	37	3,073,149	51	6,201,713
North Central Division	90	8,871,263	15,507,189	77.3	104	9,294,663	153	19,300,335
Western Division	9	1,958,204	2,457,096	25.5	15	2,113,204	21	2,929,596
North Atlantic Division:								
Maine	3	611,000	1,245,000	103.7	3	611,000	3	1,245,000
New Hampshire					1	500,000		
Vermont	2	275,000	529,436	92.5	2	275,000	2	529,436
Massachusetts	6	5,666,321	10,638,583	87.8	6	5,666,321	8	10,641,083
Rhode Island	1	643,637	980,836	52.4	1	643,637	1	980,836
Connecticut	2	1,954,023	4,154,811	112.6	2	1,954,023	3	4,710,811
New York	14	8,213,631	16,352,658	99.1	15	8,765,631	17	16,362,158
New Jersey					2	1,386,369		
Pennsylvania	14	1,915,390	4,068,789	112.5	19	3,937,390	20	4,686,241
South Atlantic Division:								
Delaware	1	83,000	83,000	.0	1	83,000	1	83,000
Maryland	2	3,027,600	3,030,000	.1	6	3,027,600	4	3,035,000
District of Columbia	2	116,000	430,000	270.7	4	116,000	2	430,000
Virginia	5	338,460	1,040,448	207.4	5	338,460	7	1,391,048
West Virginia	3	138,653	188,150	35.7	4	138,653	3	188,150
North Carolina	5	264,000	291,306	10.3	6	274,000	8	357,806
South Carolina	4	180,000	203,000	12.8	6	492,000	4	203,000
Georgia	3	478,170	655,202	37.0	4	478,170	5	775,203
Florida							2	20,000
South Central Division:								
Kentucky	5	560,400	802,000	43.1	9	585,400	12	1,177,000
Tennessee	12	1,232,375	1,786,900	44.9	13	1,232,375	18	1,847,400
Alabama	2	302,000	300,000	a.7	2	302,000	3	325,000
Mississippi	2	552,061	574,000	4.0	2	552,061	5	574,000
Louisiana	3	328,313	1,563,313	376.1	4	328,313	8	1,616,313
Texas	1	17,000	20,000	17.6	6	61,000	5	662,000
Arkansas					1	12,000		
North Central Division:								
Ohio	19	1,812,711	3,481,276	92.0	24	2,009,711	29	5,072,062
Indiana	9	902,000	1,711,129	89.7	11	1,022,000	9	1,711,129
Illinois	17	1,686,910	3,823,569	126.7	20	1,738,910	24	3,849,569
Michigan	9	1,081,392	1,428,062	32.1	9	1,081,392	10	1,508,062
Wisconsin	5	779,022	891,516	14.4	7	783,022	7	891,516
Minnesota	2	609,853	1,111,783	82.3	2	609,853	6	1,324,876
Iowa	14	746,620	953,714	27.7	15	796,620	19	1,231,714
Missouri	9	1,062,000	1,733,000	63.2	10	1,062,400	21	1,975,207

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States.	Number of institutions.	Productive funds.		Increase.	1879-80.		1889-90.	
		1879-80.	1889-90.		Number of institutions.	Productive funds.	Number of institutions.	Productive funds.
North Central Division—Continued.				*Per ct.*				
North Dakota							2	$25,000
South Dakota							4	11,000
Nebraska	1	$25,000	$43,140	72.6	1	$25,000	7	1,236,700
Kansas	5	165,755	330,000	99.1	5	165,755	15	463,500
Western Division:								
Montana							1	3,000
Colorado							4	354,000
Nevada	1	90,000	91,000	1.1	1	90,000	1	91,000
Washington					1	5,000	2	12,000
Oregon	3	97,000	187,000	92.8	7	247,000	4	237,000
California	5	1,771,204	2,179,096	23.0	6	1,771,204	9	2,232,596

From this table it will be seen that, while the increase in the productive funds of the 191 institutions distributed over the entire country is 77.3 per cent, the largest increase has taken place in the forty-two institutions of the North Atlantic Division, which reported, in 1889-90, more than 56 per cent of the total amount included in the above table. The poorest showing is made by the institutions of the Western Division, but this can be accounted for in a measure by the small number of institutions reporting in 1880 and the number of new institutions that have been founded during the decade.

The most remarkable increase recorded is in the State of Louisiana. This is due to the establishment of the Tulane University of Louisiana, which is the successor of the old University of Louisiana. It has at present an endowment fund of more than $1,000,000.

The total number of colleges and universities reporting to the Bureau in 1889-90 was 415, and of this number but 315 answered the question relating to productive funds. Among those not answering this inquiry were Clark University, Princeton, Rutgers, Dartmouth, and Haverford, all of which have large endowment funds, and would have materially increased the total amount for 1889-90. The figures here given show an increase of 71.6 per cent, which would be considerably larger if all the institutions had reported.

V.—GROUNDS, BUILDINGS, AND APPARATUS.

In considering the resources of institutions for higher education the material equipment, such as grounds, buildings, and apparatus, must not be lost sight of. The increase in the value of appliances is due, in great measure, to the increased attention given to the sciences and the consequent erection and equipment of laboratories for experiments and research. The substantial and ornamental style of architecture which has been adopted in the erection of college buildings has increased the cost of buildings while adding considerably to the general appearance of the college campus. In the following table an attempt is made to present in a convenient form the value of grounds, buildings, and apparatus of colleges and universities for the years 1879-80 and 1889-90. In order to show the rate of increase the table is divided into two parts, the first part containing statistics of such institutions only as reported in both 1879-80 and 1889-90, while the second part includes all the institutions that reported in either of the years under consideration.

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States.	1879–80. Number of institutions.	1879–80. Value of grounds, buildings, and apparatus.	1889–90. Number of institutions.	1889–90. Value of grounds, buildings, and apparatus.	Increase.
United States	245	$32,889,720	378	$72,894,729	Per ct. 70.0
North Atlantic Division	48	12,316,079	61	25,827,237	57.3
South Atlantic Division	34	4,427,000	51	7,667,925	41.8
South Central Division	39	3,324,000	67	6,932,454	59.0
North Central Division	106	11,282,241	172	26,875,475	78.2
Western Division	18	1,540,400	27	5,591,638	216.2
North Atlantic Division:					
Maine	3	805,000	3	730,000	a9.3
New Hampshire			1	125,000	
Vermont	2	340,000	2	500,000	47.1
Massachusetts	4	1,150,000	7	6,033,000	64.8
Rhode Island			1	625,000	
Connecticut	1	472,884	2	1,509,630	7.8
New York	19	5,509,569	21	7,266,773	68.4
New Jersey	1	400,000	2	1,150,000	12.5
Pennsylvania	18	3,638,626	25	5,135,626	65.3
South Atlantic Division:					
Delaware	1	75,000	1	81,000	8.0
Maryland	4	702,000	8	1,653,950	90.5
District of Columbia	2	775,000	3	1,030,000	32.1
Virginia	7	1,385,000	8	2,021,900	45.8
West Virginia	3	267,000	4	307,000	a4.4
North Carolina	7	539,000	10	958,500	77.7
South Carolina	4	170,000	8	639,000	37.6
Georgia	6	514,000	7	966,000	34.8
Florida			3	83,075	
South Central Division:					
Kentucky	9	621,000	14	854,250	16.2
Tennessee	15	1,383,000	18	2,408,550	61.5
Alabama	3	370,000	6	982,500	72.2
Mississippi	3	450,000	6	468,050	a.7
Louisiana	5	363,000	10	1,221,483	118.2
Texas	3	133,000	10	893,881	235.5
Arkansas	1	4,000	3	103,740	100.0
North Central Division:					
Ohio	26	3,181,421	35	5,480,188	53.3
Indiana	8	625,000	10	2,242,300	43.6
Illinois	22	2,378,600	28	3,458,625	18.5
Michigan	9	1,353,442	11	2,370,392	60.2
Wisconsin	6	637,000	8	2,633,163	254.9
Minnesota	2	302,650	3	2,656,962	436.4
Iowa	15	1,040,908	20	1,790,225	45.9
Missouri	9	1,035,220	25	2,617,550	89.4
North Dakota			2	190,000	
South Dakota			5	384,720	
Nebraska	2	188,000	6	1,114,000	308.2
Kansas	7	540,000	14	1,937,350	125.6
Western Division:					
Montana			1	114,500	
Wyoming			1	153,000	
Colorado	3	190,000	4	1,723,800	793.1
New Mexico			1	5,500	
Utah			1	265,000	
Nevada	1	25,000	1	151,000	504.0
Washington	1	100,000	3	581,850	425.6
Oregon	5	193,000	5	315,200	63.3
California	8	1,032,400	10	2,281,788	111.4

a Decrease.

VI.—STATE UNIVERSITIES.

The establishment and management of State universities form an interesting subject for study and investigation. As early as 1787 the General Government passed an ordinance setting aside two townships of land in what is now Ohio for the support of a "university," and this precedent has been followed in the case of nearly every State since admitted into the Union. The funds derived from the sale of these lands have in almost every instance been devoted to the support of State universities, and if properly managed would have yielded handsome en-

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dowment funds for such institutions. But in many cases the persons to whom the management of the lands was intrusted were in too great a hurry to dispose of them, often sacrificing them at a ridiculously low figure; in some cases they served as a means of "booming" a particular State, the lands being advertised and sold at very low rates, thus inducing settlers to locate; in a few cases, where the States disposed of the land and assumed the indebtedness therefor, the funds have been mismanaged and sometimes very much impaired.

The mismanagement of these lands and the funds derived therefrom has served one good purpose. The newer States, profiting by the experience of the older, are disposing of their lands advantageously, and by the time all of them are sold their universities will have endowments far exceeding those of the older institutions.

In a number of cases the funds derived from the sale of university lands have been considerably augmented by the land grant of 1862, which was given by some of the States to the State universities, while in other cases the fund was used for the establishment of separate and distinct institutions.

The State universities have also as a rule been generously treated by the legislatures of their respective States in the matter of annual and special appropriations. Very recently the legislature of Missouri granted to the State University at Columbia the direct tax refunded to the State by the General Government, amounting to $647,900. This amount is to be added to the permanent endowment fund, increasing the latter to $1,180,946.

The statistics of State universities for the year under consideration are given in the table on the following page.

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TABLE 4.—*Statistics of State universities for the year 1889-90.*

Name.	Colleges of arts and science.				Number of students in graduate department.	Professional schools.			Total number of instructors.	Total number of students.	Number of endowed professorships.	Number of State scholarships.	Number of other scholarships.	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Income from productive funds.	Receipts from tuition fees.	State appropriation.	Total income.	Benefactions.
	Preparatory department.		Undergraduate department.			Number of schools.	Number of instructors.	Number of students.													
	Number of instructors.	Number of students.	Number of instructors.	Number of students.																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
University of Alabama	0	0	23	182	3	1	3	21	26	206	0	0	0	12,000	$380,000	$300,000	$24,000	$900	0	$36,900	0
University of California	0	0	38	380	21	4	33	300	67	701	1	0	0	41,330	1,676,088	2,035,096	114,092	0	$98,348	213,947	0
University of Colorado	------	75	13	45	7	1	10	23	23	150	0	0	0	8,140	120,000	62,000	------	300	------	45,000	0
University of Georgia	0	0	13	160	1	2	15	158	28	319	1	0	0	14,000	183,000	445,202	31,199	0	0	31,199	$225
University of Illinois	5	113	31	350	6	0	0	0	32	469	0	0	0	19,000	460,000	450,000	24,606	12,626	46,044	98,963	0
Indiana University	3	99	25	310	12	1	2	17	30	438	0	0	90	12,000	240,000	500,000	22,941	5,155	23,000	51,922	2,000
State University of Iowa	0	0	26	288	9	5	55	459	57	737	0	0	0	23,656	270,000	232,487	17,554	27,585	54,000	100,710	100
University of Kansas	------	138	25	199	17	2	5	88	33	509	0	0	0	12,541	500,000	165,000	9,000	270	72,125	82,735	1,500
Louisiana State University and Agricultural and Mechanical College	2	85	11	72	0	0	0	0	13	157	0	0	0	19,000	206,000	318,313	14,556	0	10,000	39,556	0
University of Michigan	0	0	53	925	78	5	43	1,155	96	2,158	0	0	0	74,599	1,200,000	550,000	38,700	95,884	194,820	144,677	------
University of Minnesota	------	46	28	394	48	5	64	265	103	1,002	0	0	0	25,000	1,350,000	800,000	30,000	12,000	65,000	330,000	------
University of Mississippi	------	39	11	178	13	1	1	16	12	246	0	0	5	13,000	350,000	554,000	32,643	800	0	85,513	0
University of the State of Missouri	------	104	------	131	----	2	38	326	67	737	----	----	----	22,647	534,000	540,000	27,970	10,605	33,500	73,414	------
University of Nebraska	8	138	26	236	15	0	0	0	29	475	0	0	0	11,412	678,000	952,560	30,000	------	80,000	110,000	0
University of Nevada	2	87	8	50	0	0	0	0	10	137	0	0	0	3,000	151,000	91,000	------	------	28,000	28,000	------
University of North Carolina	0	0	16	165	14	1	2	33	18	200	----	----	11	34,000	287,000	10,000	640	8,248	20,000	28,887	------
University of North Dakota	------	70	11	24	0	0	0	0	11	151	0	0	0	3,000	110,000	0	0	0	23,400	24,100	25
Ohio State University	------	165	32	221	13	2	----	26	32	425	0	88	0	9,313	1,500,000	539,470	42,270	6,868	75,100	129,072	0
University of Oregon	0	0	9	182	0	2	23	52	32	292	0	0	0	3,300	105,000	149,000	9,149	2,991	11,277	23,417	4,100
University of South Carolina	0	0	23	175	10	2	4	44	26	227	0	0	6	30,000	275,000	0	0	5,000	42,000	55,000	0
University of South Dakota	6	210	21	71	4	0	0	0	27	435	0	0	0	2,100	130,000	0	0	0	35,000	39,000	0
University of Tennessee	0	0	18	250	1	3	21	259	38	510	0	275	11	7,000	513,000	426,000	25,410	3,000	0	41,810	0
University of Texas	0	0	15	226	4	1	2	79	15	307	0	0	0	6,300	250,000	642,000	42,000	3,840	12,500	58,340	16,000
University of Virginia	0	0	22	242	11	2	10	264	31	483	4	0	17	45,000	1,034,900	290,600	16,866	42,040	40,000	109,681	------
University of Washington	------	256	10	31	0	0	0	0	10	287	0	0	0	3,000	525,600	------	------	4,000	5,000	9,000	------
University of West Virginia	4	129	10	59	----	1	2	10	16	208	----	----	----	6,000	165,000	108,000	6,400	1,000	25,000	32,400	------
University of Wisconsin	0	0	49	488	21	2	10	163	70	800	1	0	11	33,000	1,800,000	251,236	27,457	16,549	112,570	202,987	20,000
University of Wyoming	------	44	------	9	----	----	----	----	12	80	----	----	----	1,500	153,000	------	------	------	------	------	------
Total	30	1,798	567	6,043	308	45	343	3,758	964	12,846	7	363	151	494,838	15,146,588	10,411,964	587,453	259,661	1,106,684	2,176,250	43,950

The following shows the present organization of the State universities and the manner in which the controlling power is chosen:

The *University of Alabama* comprises—

I. Academic Department.. { Classical course. / Scientific course. / Literary course. / Civil engineering course. / Mining engineering course.

II. Law Department.

It is controlled by—

Board of Trustees.. { Governor of State, / State superintendent of education. } *Ex officio.* / 9 trustees appointed by the governor and confirmed by the senate.

The *University of California* comprises—

1. College of Letters.. { *a* Classical course. / *b* Literary course. / *c* Course in letters and political science.
2. College of Agriculture.
3. College of Mechanics.
4. College of Mining.
5. College of Civil Engineering.
6. College of Chemistry.
7. Lick Observatory.
8. College of Law.
9. College of Medicine.
10. College of Dentistry.
11. College of Pharmacy.

It is controlled by—

Board of Regents.. { Governor. / Lieutenant governor. / Speaker of assembly. / Superintendent of public instruction. / President of State Agricultural Society. / President of Mechanics' Institute of San Francisco. / President of university. } *Ex officio.* / 16 regents appointed by the governor and confirmed by the senate.

The *University of Colorado* comprises—

1. Department of Philosophy and Arts.. { Bachelor of arts. / Bachelor of philosophy. / Bachelor of science. / Bachelor of letters. / Master of arts. / Master of science.
2. Department of Medicine.
3. Normal School.
4. Preparatory School.

It is controlled by—

Board of Regents.. { President of university, *ex officio.* / 6 regents elected by the people.

The *University of Georgia* comprises—

1. Franklin College ..... { Bachelor of arts. / Bachelor of science. / Master of arts. / Master of science.
2. State College of Agriculture and Mechanic Arts.. { Bachelor of agriculture. / Bachelor of engineering.
3. School of Technology.
4. School of Law.
5. School of Medicine.

It is controlled by—

Board of Trustees.. { Governor. / President of board of technological school. } *Ex officio.* / One from each Congressional district of the State, four from the State at large, and two from the city of Athens, appointed by the governor and confirmed by the senate.

The *University of Illinois* comprises—

I. College of Agriculture ..... { Course in agriculture. / Junior course in agriculture.

II. College of Engineering ..... { Course in mechanical engineering. / Course in electrical engineering. / Course in civil engineering. / Course in mining engineering. / Course in architecture.

III. College of Natural Science ..... { Course in chemistry. / Course in natural history.

IV. College of Literature and Science.. { Course in English and science. / Course in Latin and science. / Course in ancient languages. / Course in philosophy and pedagogy.

Other courses ..... { Course in military science. / Course in art and design. / Course in rhetoric and oratory.

It is controlled by—

Board of Trustees.. { Governor of State. / President of State Agricultural Society. } *Ex officio.* / State superintendent of public instruction. / 9 trustees appointed by governor and confirmed by senate.

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The *Indiana University* comprises—
I. College Department.
II. Law Department.
It is controlled by—
Board of Trustees.. { 5 elected by board of education.
3 elected by alumni of university.

The *State University of Iowa* comprises—
I. Collegiate Department.. { Classical course.
Philosophical course.
General scientific course.
Literary course.
Civil engineering course.
Electrical engineering course.
II. Law Department.
III. Medical Department.
IV. Homeopathic Medical Department.
V. Dental Department.
VI. Pharmaceutical Department.
It is controlled by—
Board of Regents.. { Governor.
Superintendent of public instruction. } *Ex officio.*
One member from each Congressional district who are elected by the general assembly.

The *University of Kansas* comprises—
I. Department of Literatures, Sciences, and the Arts.. { General scientific course.
Latin scientific course.
Classical course.
Modern literature course.
Latin English course.
General language course.
Civil engineering course.
Electrical engineering course.
II. School of Law.
III. School of Music.
IV. School of Pharmacy.
It is controlled by—
Board of Regents .. { 6 appointed by governor and confirmed by the senate.
Chancellor—elected by the regents.

The *Louisiana State University and Agricultural and Mechanical College* comprises—
I. Subfreshman Department.
II. Collegiate Department.. { Literary course—A. B.
Agricultural course—B. S.
Mechanical course—B. S.
III. Commercial course.
It is controlled by—
Board of Supervisors.. { Governor of State.
Sup't of public education. } *Ex officio.*
President of university.
12 members appointed by the governor and confirmed by the senate.

The *University of Michigan* comprises—
I. Department of Literature, Science, and the Arts, comprising courses leading to— { Bachelor of arts.
Bachelor of philosophy.
Bachelor of science.
Bachelor of letters.
Civil engineer.
Mechanical engineer.
Mining engineer.
Electrical engineer.
Master of arts.
Master of philosophy.
Master of science.
Master of letters.
Doctor of philosophy.
Doctor of science.
Doctor of letters.
II. Department of Medicine and Surgery.
III. Department of Law.
IV. School of Pharmacy.
V. Homeopathic Medical College.
VI. College of Dental Surgery.
It is controlled by—
Board of Regents.. { President of university.
8 regents elected by popular vote for terms of 8 years.

The *University of Minnesota* comprises—
I. College of Science, Literature, and Arts.. { Classical.
Scientific—School of Mining and Metallurgy.
Literary.
II. College of Mechanic Arts.
III. College of Agriculture.
IV. Department of Law.
V. Department of Medicine.. { College of Medicine and Surgery.
College of Homeopathic Medicine and Surgery.
College of Dentistry.

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VI. Department of Veterinary Medicine.
VII. Graduate Department.
It is controlled by—

Board of Regents: Governor. Superintendent of public instruction. President of university. (*Ex officio.*) 7 members appointed by the governor and confirmed by the senate.

The *University of Mississippi* comprises—

I. Department of Science, Literature, and Arts: Bachelor of arts. Bachelor of science. Bachelor of philosophy. Master of arts. Doctor of philosophy.

II. School of Law.
It is controlled by—

Board of Trustees: Governor, *ex officio*. 15 members appointed by the governor and confirmed by the senate.

The *University of the State of Missouri* comprises the following schools:

I.—THE ACADEMIC SCHOOLS.

A.—*Language.*

I. English.
II. Latin.
III. Greek.
IV. Modern Languages.
V. Hebrew.
VI. Sanskrit.
VII. Comparative philology.

B.—*Science.*

VIII. Metaphysics.
IX. Mathematics.
X. Physics.
XI. Chemistry.
XII. Geology and mineralogy.
XIII. Biology.

II.—THE PROFESSIONAL SCHOOLS.

XIV. Agriculture.
XV. Pedagogics.
XVI. Law.
XVII. Medicine.
XVIII. Mining and metallurgy.
XIX. Engineering.
XX. Military science and tactics.
XXI. Art.
XXII. Commercial.

It is governed by—

Board of Curators: Consists of 9 members, appointed by the governor and confirmed by the senate.

The *University of Nebraska* comprises at present—

I. College of Literature, Science, and Arts: Classical. Literary.
II. Industrial College: Agriculture. Practical science. Civil engineering. Mechanic arts.
III. Latin or Preparatory School.
It is governed by—

Board of Regents: 6 members, elected by popular vote for terms of 6 years.

The *University of Nevada* comprises—
I. School of Liberal Arts.
II. School of Agriculture.
III. School of Mines.
IV. Normal Department.
VI. Business Department.
It is governed by a board of regents, consisting of three members, elected by popular vote.

The *University of North Carolina* comprises—

I. Undergraduate courses: Classical course. Philosophical course. Scientific course. Literary course. Engineering course.
II. School of Law.
III. School of Medicine.
IV. Graduate courses.
It is governed by—

Board of Trustees: Governor. Superintendent of public instruction. (*Ex officio.*) 80 members elected by the joint vote of the general assembly.

The *University of North Dakota* embraces—
I. Preparatory Department.
II. Collegiate Department: Classical course. Scientific course. Literary course.
III. Normal Department.
IV. School of Mines.
It is governed by a board of five trustees appointed by the governor and confirmed by the senate.

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The *Ohio State University* comprises—

I. School of Agriculture..... { Bachelor of agriculture. / Short course in agriculture.
II. School of Engineering ..... { Civil engineering. / Mechanical engineering. / Mining engineering. / Short course in mining.
III. School of Pharmacy.
IV. School of Veterinary Medicine.
V. School of Science.
VI. School of Arts and Philosophy.. { Classical course. / Philosophical course.

It is governed by—
Board of Trustees—7 members appointed by the governor and confirmed by the senate.

The *University of Oregon* comprises—

I. Collegiate Department.. { Classical course. / Scientific course. / Literary course. / English course. } A. B. degree.
II. Law School.
III. School of Medicine.

It is managed by—
Board of Regents—9 members appointed by the governor and confirmed by the senate.

The *University of South Dakota* embraces—

I. Preparatory Department.
II. Collegiate Department.. { Classical course. / Philosophical course. / Scientific course. / Literary course.
III. Music Department.
IV. Commercial Department.

The government of the university is vested in a board of nine regents, who appoint five trustees for the current management of the institution.

The *University of Tennessee* comprises—

A.—ACADEMIC DEPARTMENT.

I. College of Agriculture, Mechanic Arts, and Sciences. { Literary scientific course. / Latin scientific course. / Course in agriculture. / Course in civil engineering. / Course in mechanical engineering. / Course in chemistry and mining engineering.
II. University Department..... { Courses leading to degrees of A. M., M. S., PH. D., C. E., MIN. E., MECH. E.

B.—PROFESSIONAL DEPARTMENTS.

I. Department of Law.
II. Department of Medicine.
III. Department of Dentistry.

It is controlled by a board of trustees, which is, in a measure, self-perpetuating. The board nominates members to fill vacancies, but the election is vested in the general assembly.

The *University of Texas* embraces—

I. Academic Department.. { Bachelor of arts. / Bachelor of letters. / Bachelor of science .. { General course. / Engineering. / Chemistry. / Physics. / Geology. / Special course in letters leading to a certificate.
II. Law Department.

It is governed by—
Board of Regents—8 members appointed by the governor and confirmed by the senate.

The *University of Virginia* comprises—

I. Literary Department.
II. Scientific Department.
III. Law Department.
IV. Medical Department.
V. Pharmaceutical Department.
VI. Engineering Department.
VII. Agricultural Department.

It is governed by a rector and board of visitors appointed by the governor and confirmed by the senate. They are nine in number.

The *State University of Washington* comprises—

I. Preparatory Department.
II. Collegiate Department.. { Classical course. / Latin scientific course. / English scientific course.
III. Normal Department.
IV. Music and Art Department.

It is governed by a board of regents consisting of 7 members, who are appointed by the governor and confirmed by the senate.

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The *West Virginia University* comprises—
I. Preparatory Department.
II. Collegiate Department.. { Classical course. Scientific course.
III. Military Department.
IV. Law School.
V. School of Civil and Mining Engineering.
It is governed by a board of regents consisting of one member from each senatorial district and is self-perpetuating.

The *University of Wisconsin* embraces—

I. College of Letters and Science	1. Graduate and fellowship courses. 2. Ancient classical course. 3. Modern classical course. 4. General science course. 5. English course. 6. Civic-historical course. 7. Special science course. 8. Special course for normal school graduates.
II. College of Mechanics and Engineering	1. Civil engineering course. 2. Mechanical engineering course. 3. Mining and metallurgical engineering courses. 4. Railroad engineering course. 5. Electrical engineering course.
III. College of Agriculture	1. Experiment station. 2. Graduate courses. 3. Long agricultural course. 4. Middle agricultural course. 5. Short agricultural course. 6. Dairy course. 7. Farmers' institutes.
IV. College of Law.	
V. School of Pharmacy	Graduate course. Pharmacy course.

It is governed by—

Board of Regents	Superintendent of public instruction, President of university (*Ex officio*). 2 members from the State at large. 1 member from each Congressional district, appointed by the governor.

The *University of Wyoming* embraces—

I. Academic Department	2 years' academic course. Sub-preparatory course. Business department.
II. College of Liberal Arts	Classical course. Scientific course. Philosophical course. Literary course.

III. Normal School.
IV. Agricultural College.
V. School of Mechanics and Manual Training.
VI. School of Irrigation Engineering.
VII. College of Mechanic Arts.
It is governed by—

Board of Trustees	President of university (*Ex officio*). Superintendent of public instruction (*Ex officio*). 9 members appointed by the governor.

VII.—DENOMINATIONAL INSTITUTIONS.

The majority of institutions for higher education in this country are at present carried on under the auspices of the several religious denominations. As stated before, the total number of institutions reporting to the Bureau in 1889-90 is 415, and of this number but 99 claim to be nonsectarian, leaving 316 that are under the control of some religious sect. It must not, however, be inferred that the instruction in denominational institutions has a sectarian bias. On the contrary a large number of them state particularly that their teaching is entirely unsectarian and that students will not be disturbed in their respective religious beliefs.

These denominational institutions have been the pioneers of higher education in several States, and have, at least in the Western States, prepared the way for the establishment of good State institutions. This they have succeeded in doing, not by advocating the establishment of such institutions, but by creating and fostering a desire for knowledge and making the people of the several communities realize the value of a liberal education. This much accomplished, the establishment of a State university naturally followed, the funds having been provided by the land policy of the General Government in setting aside certain tracts of land for the purpose of founding institutions of learning.

The proceeds arising from the sale of these lands are generally used in the establishment of new institutions in preference to giving the money to some one

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of the institutions already in operation. This is rendered necessary by reason of the denominational relations of nearly all institutions for higher education not under State control. To give public money to any one of these institutions would cause a great deal of jealousy and bitterness throughout the State. Again, if the money were distributed among the different institutions of the States a great deal of its effectiveness would be destroyed. Thus it will be seen that the States have, as a rule, adopted the most feasible plan. The number of institutions under the control of the several religious denominations is as follows:

Denomination of colleges and universities.

Nonsectarian		99
METHODIST.		
Methodist Episcopal	52	
Methodist Episcopal South	16	
African Methodist Episcopal	3	
African Methodist Episcopal Zion	1	
Methodist Protestant	2	
		74
PRESBYTERIAN.		
Presbyterian	35	
Cumberland Presbyterian	6	
United Presbyterian	6	
Reformed Presbyterian	1	
Associate Reformed Presbyterian	1	
		49
BAPTIST.		
Baptist	36	
Free Baptist	6	
Seventh-Day Baptist	2	
		44
Roman Catholic		51
Congregational		22
Christian		20
Lutheran		19
United Brethren		10
Protestant Episcopal		6
Reformed		6
Friends		6
Universalist		4
Evangelical Association		2
German Evangelical		1
Seventh-Day Adventist		1
New Church (Swedenborgian)		1
Total		415

VIII.—ORGANIZATION OF A NUMBER OF LEADING UNIVERSITIES.

Having shown the organization of the State universities, an attempt is here made to present in a somewhat similar manner the organization of a number of other leading institutions for higher education in the United States. These institutions are well equipped not only with able professors and instructors, excellently chosen libraries, and scientific apparatus, but with valuable buildings and large productive funds, both of which are necessary for effective work. Nearly all of the selected institutions provide for advanced work in graduate departments in addition to the regular undergraduate and professional courses. They are well supplied not only with endowed professorships, but also with fellowships and scholarships to assist students in obtaining an education.

As will be observed, all the institutions with two exceptions are located in the extreme eastern section of the country, and among them are included the oldest institutions of the country. They are arranged in the order of their organization. The number of professors and students in the several departments in 1889-90 is given.

Name of institution.	Number of professors and instructors.	Number of students.	
		Male.	Female.
Harvard University	217	2,126	0
Harvard College	101	1,274	0
Lawrence Scientific School	29	69	0
Bussey Institution	5	3	0
Graduate Department	.....	112	0
Divinity School	9	36	0
Law School	7	265	0
Medical School	55	310	0
Dental School	19	35	0
School of Veterinary Medicine	19	22	0
Yale University	143	1,445	32
Yale College	46	736	0
Sheffield Scientific School	38	343	0
Graduate Department	61	81	0
Theological Department	14	136	0
Law Department	24	111	0
Medical Department	20	54	0
School of Fine Arts	6	10	32
College of New Jersey (Princeton)	45	709	0

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studies in one or another of the other schools, but in order to do this they were obliged to matriculate and pay the fee of $5 in each school in which they studied. Seniors in the School of Arts were permitted to elect certain subjects in the other schools. In fact, the attitude of the institution towards the student was one of multiplied opportunities, but opportunities held more or less out of relation to each other. What seemed especially to be needed, from the point of view of the student, was such a unification of the institution as would make its varied opportunities more available to those students whose equipment and capabilities justified them in desiring to study in more than one school.

The graduate work also stood in need of organization. It had grown to considerable proportions, but depended too much upon individual professors. There was no general standard to which all must conform.

"For this purpose," says President Low, "it was necessary to secure a body which could, in effect, direct the graduate work where it concerned itself with more than one school and provide a common standard for all the schools. Incidentally it was desirable, if possible, to place this work, in its general phases, under the charge of faculties rather than of individuals."

A faculty of philosophy was formed to take charge of the advanced work in philosophy, philology, and letters. The central body or university council was then formed, based primarily on the four university faculties of law, mines, political science, and philosophy, which between them comprise all the professors entitled to a seat in any faculty, and yet no professor sits in any more than one of them. The council was made to consist of twelve members, four of whom are men of letters, four of whom are men of science, and four of whom are men of law and political science.

It was decided that every student should matriculate simply as a student of Columbia, paying but the one matriculation fee, and thereafter that the facilities offered by any faculty or by all should be open to him, subject, of course, to any necessary regulations. Thus at one stroke Columbia ceased to be divided into fragments, and took upon herself the aspect of a university, wherein each department was related to every other and every one strengthened all.

The general control of the graduate work was also placed into the hands of the university council. "The result," says President Low, "has been to secure a common basis of requirement for the degrees of master of arts and doctor of philosophy, under whatever university faculty they may be obtained, which common basis represents a combination, for the most part, of the best requirements hitherto maintained in any quarter."

"The most important result of the reorganization of the institution thus far attained in its bearing upon the college proper is seen in the enlarged option already given to the members of the senior class. By a unanimous vote of the faculty of the School of Arts, it was resolved that courses under any university faculty designated by such faculty as open to seniors should be accepted as optional courses for seniors in the School of Arts. This action, being referred by the trustees to the president and university council with power, was unanimously indorsed by them. The senior year is thus made the point of contact between the college and the university. This arrangement, while it has the advantage of maintaining the dignity of the faculty of the college proper as a degree-granting faculty, has the other undoubted advantage of making the bachelor's degree seem, not so much the end of a student's course, as what it ought to be, merely an incident on the way to the true goal, the professional degree, or the degree of doctor of philosopy. While it in no way cheapens the bachelor's degree, it does shorten by one year the time required for the college and professional course combined."

X.—New Institutions.

Clark University, Worcester, Mass., was first opened for instruction, October 2, 1889. This institution was founded and endowed by Mr. Jonas G. Clark. Among the reasons given by Mr. Clark for choosing Worcester as the seat of the new foundation is the following: "Because its location is central among the best colleges of the East, and by supplementing rather than duplicating their work, he hopes to advance all their interests and to secure their good will and active support, that, together, further steps may be taken in the development of superior education in New England."

The corner stone of the main building was laid on October 22, 1887. The building is plain, substantial and well appointed, 204 x 114 feet, four stories high, and five in the centre, with superior facilities for heating, lighting, and ventilation, and has been constructed of brick and granite, and finished throughout in oak. The chemical building, erected in 1888, is constructed throughout of brick. The

dimensions of the building are 134.6 x 135 feet; the main body of the building is three stories, and the southwestern wing is two stories high. Another department building is in course of erection.

On April 3, 1888, Dr. G. Stanley Hall, then professor of psychology at Johns Hopkins University, was invited to the presidency. The official letter conveying this invitation contained the following expression, showing the liberal spirit animating the trustees and their confidence in the man whom they wished to honor: "They desire to impose on you no trammels; they have no friends for whom they wish to provide at the expense of the interests of the institution; no pet theories to press upon you in derogation of your judgment; no sectarian tests to apply; no guarantees to require, save such as are implied by your acceptance of this trust. Their single desire is to fit men for the highest duties of life, and to that end, that this institution, in whatever branches of sound learning it may find itself engaged, may be a leader and a light."

Having accepted this invitation, Dr. Hall was granted a year's leave of absence with full pay in order to inspect universities in Europe. During this year he visited every European country but Portugal, conferring with ministers of education, heads of universities, and leading scientific men. As a result of his investigations Dr. Hall, in his first annual report to the board of trustees, thus defines the work of Clark University:

"1. It must be of the highest and most advanced grade, with special prominence given to original research. This our country chiefly lacks and needs for both its material and educational welfare. This is in the current of all the best tendencies in the best lands, and is the ideal to-day of, I believe, about every scientific man, who is able and in earnest, throughout the world. For this our location offers the rarest opportunities and inducements yet possible in this country.

"2. We must not attempt at once to cover the entire field of human knowledge, but must elect a group of related departments of fundamental importance, and concentrate all our care to make these the best possible. Each science has become so vast and manifold that it is impossible to cultivate the frontier of all at a single university. This is more and more recognized abroad, and is still more true under our American system of private endowment than on the European plan, with a national treasury to draw from. If coming universities, instead of imitating, would supplement others, will elect each its group of studies, all the gain in economy and effectiveness which skilled labor has over unskilled will be secured in the field of highest education.

"3. For our group we chose at first five fundamental and related sciences. Work in science can be quickest organized. Great libraries and museums, and everything else that only age can bring, can be dispensed with at first, and a complete outfit of the best apparatus and of all needed books can be gathered in a short time. Again, this is a practical country, and its industries are sure to depend more and more on the progress of science. So far, we have utilized science with extraordinary ingenuity in our inventions, but have done comparatively little to create or advance it. We desire to make a patriotic endeavor to develop American discoverers as well as inventors. Finally, and above all, science, with its modern methods, has become an unsurpassed school of discipline, culture, and reverence.

"4. We must seek the most talented and best-trained young men. We must not exploit them for the glory of the institution, work them in a machine, nor retard their advancement, but we must give them every needed opportunity and incentive. Their salaries must be among the very best in the country; yet we must not ask them to spend their best energies in teaching and earning tuition fees for the university, and must leave open all possibilities, should such problems as individual fees, a periodic year in Europe, etc., arise later. We must give to those who know how to value it such facilities as we are able, that they may work for science and for themselves, requiring in return only a limited amount of mutual instruction, special and advanced enough to aid rather than divert from research (and no one is so eager and so able to teach the few fit as a discoverer), and careful conformity to a few obvious regulations."

The five sciences selected by the university are mathematics, physics, chemistry, biology, including anatomy and physiology, and psychology, including neurology, anthropology, criminology, and history of philosophy. In addition to these, modern languages are taught in a way to meet the practical needs of students in these departments. The policy of the institution is, first, to strengthen the departments already established, and then proceed to the establishment of those which are scientifically most closely related to the established departments.

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According to the register for 1889-90, no clearly marked lines exist between instructors and students. Fellows and scholars who have attained some degree of mastery in a special line of work give brief special courses, which are often attended by professors. This is a stimulus to the student, and both tests and exhibits his powers in teaching. The total number of professors and students during the first session of the institution was 60, selected in part only from about 900 applicants for various positions. The number selected included graduates from forty-eight different universities and colleges. Only graduate students, or those of equivalent attainments, are admitted, unless in rare and special cases. The tuition fee is $200 per annum.

The University of the Northwest, Sioux City, Iowa, was opened for instruction in September, 1890. It is located at Morningside, a suburb of Sioux City, and is reached by the elevated railway. The institution is under the fostering care of the Methodist Episcopal Church, but is free from sectarianism, and will be conducted on broad Christian principles. The following departments have been established: Preparatory department; college of liberal arts; college of commerce; college of didactics; college of law; conservatory of music, and college of medicine. The college of medicine will be opened in September, 1891.

Lake Charles College, incorporated under the Louisiana statutes, June 22, 1887, is located at Lake Charles, in southwestern Louisiana. The college, preparatory and academic departments were opened for instruction, October 1, 1890. The institution is open to both sexes. The home life of the college is after the "cottage plan," and separate cottages are provided for young ladies and gentlemen, each accommodating about thirty students. Each cottage is under the care of a matron.

Parker College, Winnebago City, Minn., was founded by the Free Baptists, and was first opened for instruction in September, 1888. The college has $100,000 worth of property, $65,000 of which is productive endowment.

Cotner University, Lincoln, Nebr., was first opened for instruction in 1889, under the name of Christian University, which was changed to its present name on the 1st of June, 1890. This institution was established by the Christian Church of Nebraska, and is under the presidency of David R. Dungan, A. M. The courses already established are collegiate preparatory, normal preparatory, special Biblical, and medical. Other courses will be established when needed.

Black Hills College, Hot Springs, S. Dak., was founded by the Black Hills Mission of the Methodist Episcopal Church, and opened for instruction on Thursday, September 11, 1890. The college building is constructed of gray sandstone. It is 54 feet wide, 74 feet long, and three stories high. The recitation halls are large, commodious, and well lighted. The campus is a gently rolled tract of land comprising 20 acres situated in the very center of the town.

University of Chicago, Chicago, Ill.—One of the most generous benefactors to the cause of education is Mr. John D. Rockefeller, a prominent member of the Baptist church. When the Board of American Baptist Education Society, in May, 1889, decided to establish a well-equipped college in the city of Chicago, Mr. Rockefeller made a subscription of $600,000 towards the purpose, which sum was increased during the succeeding year by about $600,000 more in subscriptions, representing more than two thousand persons. Three months after the completion of this subscription, Mr. Rockefeller made an additional proffer of $1,000,000. The following are the formal terms in which these subscriptions were made:

MAY 15, 1889.

Rev. FRED. T. GATES, *Corresponding Secretary*
AMERICAN BAPTIST EDUCATION SOCIETY:

My DEAR SIR: I will contribute $600,000 toward an endowment fund for a college to be established at Chicago, the income only of which may be used for current expenses, but not for land, buildings, or repairs, providing $400,000 more is pledged by good and responsible parties, satisfactory to the Board of the American Baptist Education Society and myself, on or before June 1, 1890, said $400,000, or as much of it as shall be required, to be used for the purpose of purchasing land and erecting buildings, the remainder of the same to be added to the above $600,000 as endowment.

I will pay the same to the American Baptist Education Society in five years, beginning within ninety days after completion of the subscription as above and pay 5 per cent each ninety days thereafter until all is paid; providing not less than a proportionate amount is so paid by the other subscribers to the $400,000; otherwise this pledge to be null and void.

Yours, very truly,

JNO. D. ROCKEFELLER.

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CLEVELAND, OHIO, *September 16, 1890.*

To the Board of Trustees of the University of Chicago:

GENTLEMEN: I will contribute $1,000,000 to the University of Chicago, as follows:

Eight hundred thousand dollars, the income only of which shall be used for nonprofessional graduate instruction and fellowships, and not for land, buildings, or repairs.

One hundred thousand dollars, the income only of which shall be used for theological instruction in the divinity school of said University, and not for land, buildings, or repairs.

One hundred thousand dollars for the construction of buildings for said divinity school.

I will pay the same to the said University in seven years, beginning October 1, 1890, and pay one twenty-eighth each three months thereafter in cash or approved securities at a fair market value, until the whole is paid, it being understood that a certain pledge made July 15, 1890, for $56,500 to the Baptist Union Theological Seminary of Chicago shall be included in the above $1,000,000; and also that the said seminary is to become an organic part of the said University; and also that the transfer of said seminary to the grounds of the University of Chicago shall be made within two years from this date; and also that a thoroughly well-equipped academy shall be established in the buildings hitherto occupied by the said seminary on or before October 1, 1892.

Yours truly,

JOHN D. ROCKEFELLER.

The institution was chartered September 10, 1890, as the University of Chicago, and the management of the corporation is vested in a board of twenty-one trustees. The qualifications of the trustees and of the president of the University are thus set forth in the application for the charter:

"At all times two-thirds of the trustees and also the president of the University and of its said college shall be members of regular Baptist churches—that is to say, members of churches of that denomination of Protestant Christians now usually known and recognized under the name of the regular Baptist denomination; and as contributions of money and property have been and are being solicited, and have been and are being made, upon the conditions last named, this charter shall not be amended or changed at any time hereafter so as to abrogate or modify the qualifications of two-thirds of the trustees and the president above mentioned, but in this particular this charter shall be forever unalterable.

"No other religious test or particular religious profession shall ever be held as a requisite for election to said board, or for admission to said University, or to any department belonging thereto, or which shall be under the supervision or control of this corporation, or for election to any professorship, or any place of honor or emolument in said corporation, or any of its departments or institutions of learning."

The site of the University consists of three blocks of ground lying between the two South Parks of Chicago, and fronting on the Midway Plaisance, which is a park connecting the other two. One-half of this site was given by Marshall Field, of Chicago, and the other half was purchased at a cost of $132,500.

William R. Harper, Ph. D., professor of the Semitic languages and Woolsey professor of Biblical literature in Yale University, was elected to the presidency at the first meeting of the board. He has decided to accept the position to which he was elected by the unanimous vote of the board.

The work of the University will probably be begun in October, 1892, and is thus set forth in Official Bulletin No. 1, published by the trustees:

The work of the University shall be arranged under three general divisions, viz., The University Proper, The University-Extension Work, The University Publication Work.

1. THE UNIVERSITY PROPER will include—

(1) *Academies:* The first academy of the University will be established, in accordance with the terms of the gift of Mr. John D. Rockefeller, at Morgan Park, Ill. Others will be organized or affiliated as rapidly as favorable opportunities are presented.

(2) *Colleges:* Of these there will be organized—

(*a*) The College of Liberal Arts, in which the curriculum will be arranged with a view to the degree of B. A.

(*b*) The College of Science, in which the curriculum will be arranged with a view to the degree of B. S.

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(c) The College of Literature, in which the curriculum will be arranged with special view to the study of Modern Languages and Literature, History, etc., with a view, likewise, to the degree of B. S.

(d) The College of Practical Arts, in which the curriculum will be arranged with greater reference, than in the other Colleges, to the practical departments of business and of professional life, with a view to the degree of B. S.

(3) *Affiliated colleges:* The character of affiliation will be determined by existing circumstances in particular cases.

(4) *Schools:* Of these, there will be organized—

(a) The Graduate School, which will include all graduate work of a nonprofessional character.

(b) The Divinity School, which will include the curriculum of study ordinarily presented by Divinity Schools.

As soon as the funds of the University permit, there will also be established—

(c) The Law School.

(d) The Medical School.

(e) The School of Engineering, which will include civil, mechanical, and electrical engineering.

(f) The School of Pedagogy.

(g) The School of Fine Art.

(h) The School of Music.

2. THE UNIVERSITY EXTENSION WORK, which will include—

(1) *Regular courses of lectures*, delivered in and about the city of Chicago, in accordance with the best developed plans of University Extension.

(2) *Evening courses* in college and university subjects, in and about the city of Chicago, for men and women whose daily occupation will not permit them to take advantage of the regular college and university courses.

(3) *Correspondence courses* in college and university subjects for students residing in all parts of the country whose circumstances do not permit them to reside at an institution of learning during all of the year.

(4) *Special courses* in a scientific study of the Bible in its original languages and in its translations, to be conducted by University instructors at the University at times which shall not conflict with University work.

(5) *Library Extension*, in connection with the preceding forms of University Extension work.

3. THE UNIVERSITY PUBLICATION WORK, which will include—

(1) The printing and publishing of University bulletins, catalogues, and other official documents.

(2) The printing and publishing of special papers, journals, or reviews of a scientific character, prepared or edited by instructors in the various departments of the University.

(3) The printing and publishing of books prepared or edited by University instructors.

(4) The collecting, by way of exchange, of papers, journals, reviews, and books similar to those published by the University.

(5) The purchase and sale of books for students, professors, and the University library.

The general regulations published by this institution will undoubtedly attract considerable attention on account of the many new features that will be introduced. Instead of the customary three months' suspension of work during the summer, the year is divided, for the purpose of instruction, into four quarters, beginning on the 1st day of October, January, April, and July, and continuing twelve weeks each, thus leaving a week between the end of one quarter and the beginning of the next. Each quarter is divided into two terms of six weeks each. Students will be allowed to take as vacation any one of the four quarters, or two terms of six weeks in different parts of the year. By attending four quarters per year, students will be able to complete the course in three years.

The courses of instruction will be classified as majors and minors. The major will call for 10 to 12 hours of class-room work each week, the minor for 4 to 6 hours. All courses are to continue six weeks, but the same subject may be continued through two or more successive terms either as a major or a minor.

The regulations regarding the teaching body will be fully appreciated by the members thereof. Each resident professor or teacher shall lecture thirty-six weeks of the year, 10 to 12 hours a week, and no instructor shall be required to lecture more than this amount. For any time that he may teach in addition to the three-quarters required, he shall receive either an extra two-thirds pro rata salary or an extra full pro rata vacation. A teacher who has taught three

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years of 48 weeks each, or six years of 42 weeks each, will thus be entitled to a year's vacation on full salary.

XI.—NEW BUILDINGS DURING 1889-90.

Selma University, Selma, Ala.—A four-story brick building for dormitory and school purposes.

University of California, Berkeley, Cal.—A large and commodious building, costing $60,000, to be used as a chemical laboratory.

Napa College, Napa, Cal.—An astronomical observatory, equipped with an eight-inch equatorial telescope.

Hesperian College, Woodland, Cal., has sold its building and erected a new one one-half mile from the old site. The new building consists of three stories; the first is set apart for a boarding department; the second consists of the chapel and recitation rooms, while the third is used for societies, art department, laboratory, and library.

University of Colorado, Boulder, Colo.—Woodbury Hall is a new dormitory for male academic students, with accommodations for 48 young men.

Yale University, New Haven, Conn.—Osborn Hall, used as recitation rooms for the academical department, was erected in 1889 at a cost of nearly $200,000. Chittenden Library was erected in 1890.

Mercer University, Macon, Ga., has in process of erection a large building of brick and stone, three stories high, 102 by 155 feet, to cost about $25,000. It will contain a library room, a chapel, and several recitation rooms.

University of Illinois, Champaign, Ill., reports the erection of a new military building, 100 by 150 feet, in one grand hall for drill purposes and large audiences upon special occasions. The cost of the building is $15,000.

German-English College, Galena, Ill., will be removed in the fall of 1891 to Charles City, Iowa, where new buildings are in course of construction. The city gives to the college $30,000 cash, a campus, and the use of city water for ten years.

Illinois College, Jacksonville, Ill., will erect during 1891 a new gymnasium to cost $10,000, which will be equipped with apparatus, etc., costing $2,000.

Northwestern College, Naperville, Ill., has erected a new building, 71 by 41 feet, which provides, among other accommodations, a limited number of rooms for lady students.

Indiana University, Bloomington, Ind., reports the completion of library hall, 140 by 75 feet. The central part of the building is occupied by the book stacks. The ends of the building are two stories high and contain rooms used for various library purposes, seminary rooms, etc.

Wabash College, Crawfordsville, Ind.—Yandes Hall, the new library building, is expected to be completed in June, 1891. It is fireproof and built in the form of a cross, extending 110 feet east and west, 90 feet north and south, and is two stories high.

Hanover College, Hanover, Ind., reports the completion of an astronomical observatory. It consists of a central building two stories high with wings on the east and west sides. The telescope, which is on the second story of the central building, is a 7½ inch. A good transit instrument is placed in the eastern wing, while the western wing is occupied by a Howard astronomical clock.

Butler University, Irvington, Ind.—A building for the preparatory department was erected in 1890 at a cost of $20,000. An astronomical observatory has also been completed and equipped.

Earlham College, Richmond, Ind., has completed the erection of a wooden structure, 60 by 40 feet, to be used as a gymnasium. It is well furnished with modern apparatus, and is under the charge of a director.

Luther College, Decorah, Iowa.—The main building (170 by 52 feet, four stories besides basement) was destroyed by fire May 19, 1889. A new building reared on the foundation of the old, and of the same dimensions, was dedicated and occupied on October 14, 1890.

Drake University, Des Moines, Iowa, reports that the Alumni Science Hall, a new brick building 60 by 80 feet, is being erected. It is three stories in height besides the basement, and will be occupied by laboratories, museum, gymnasium, etc.

Lenox College, Hopkinton, Iowa, has erected Clarke Memorial Hall at a cost of $8,000. It is to be used as a boarding hall for young ladies. An astronomical observatory has also been erected.

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Two buildings were erected by *Simpson College*, Indianola, Iowa, during 1889 and 1890. Science Hall contains the laboratory, museum, study and recitation rooms, and music and art rooms, while Ladies' Hall affords facilities for accommodating young ladies with rooms and board.

The *State University of Iowa*, Iowa City, will soon have two new buildings upon its campus. The twenty-third general assembly appropriated $50,000 for a building to be used as a chemical laboratory. It was begun in August, 1890, and will be ready for occupancy in September, 1891. The sum of $35,000 has been subscribed for a new building for the Christian associations. It will contain a large assembly hall, gymnasium, reading rooms, and bath rooms, and will be completed by September, 1891.

Iowa Wesleyan University, Mount Pleasant, Iowa, has in course of erection a new Chapel and Science Hall. The building will be 102 by 95 feet and will be used as chapel, laboratories, recitation rooms, professors' rooms, etc.

The main building of *Western College*, Toledo, Iowa, was destroyed by fire December 26, 1889. A new building much superior to that destroyed is now finished and occupied.

Washburn College, Topeka, Kans., reports the erection, at a cost of $37,000, of a new chapel building, of stone, 112 by 90 feet. Besides the audience room the building affords nine recitation rooms and a Y. M. C. A. room.

Johns Hopkins University, Baltimore, Md., reports the construction of a hall for the uses of the Y. M. C. A. The building is the gift of Mr. Eugene Levering, of Baltimore, and contains a large reading room, a room for devotional services, a committee room, an office for the dean, and a large assembly room where 429 persons may be seated.

Harvard University, Cambridge, Mass., has erected a substantial brick athletic building for the use of members of the principal teams and of other students. It has a floor area of 7,848 square feet and was the gift of Henry A. Carey, who gave $36,000 for its erection.

University of Michigan, Ann Arbor, Mich.—The State legislature and the city of Ann Arbor together appropriated the sum of $75,000 for the erection of a hospital building, which will greatly increase the facilities for clinical instruction.

Olivet College, Olivet, Mich., reports the erection of Burrage Hall and Adelphic Hall. The former, which is used as a library, is 110 by 52 feet and has a capacity of 100,000 volumes. Adelphic Hall, which is the home of the Adelphic Society, contains an auditorium, reception rooms, cloak rooms, library, committee rooms, and janitor's room.

University of Minnesota, Minneapolis, Minn.—Pillsbury Hall and Museum, the gift of Hon. J. S. Pillsbury, is used for instruction in science and for a museum. It is 245 feet in length and is built of stone. The Chemical and Physical Laboratory is built of Roman brick with red sandstone basement, 192 feet front, and furnishes accommodations to the departments of physics and chemistry. The Law building, 80 feet front, built of pressed brick with red sandstone trimmings, was finished in 1889. It contains a large room for library, a large lecture room, four smaller lecture and recitation rooms, and offices for the dean and professors.

The *University of Mississippi* reports the erection of a library building containing four large rooms and constructed on the modern style of architecture.

Bellevue College, Bellevue, Nebr., now furnishes boarding facilities for young ladies. Elwina Hall, a four-story building containing a dining room, kitchen, laundry, housekeeper's rooms, library, reception room, halls, and twenty-two rooms for young ladies was erected during 1889-90.

The *College of New Jersey*, Princeton, N. J., reports the erection of Albert B. Dod Hall to be used as a dormitory, of the magnetic observatory and of a dynamo building. A number of other buildings have been contracted for or are in course of erection.

Colgate University, Hamilton, N. Y., reports the erection in 1889 of a new library building. No particulars are given.

Cornell University, Ithaca, N. Y., reports the completion of Morse Hall. This building, which is for the exclusive use of the chemical department, is built of brick and is nearly fire-proof. It is 130 by 70 feet, with high basement and two stories, and contains forty rooms besides a large sub-basement. Additions have also been made to Sibley College.

Syracuse University, Syracuse, N. Y., has erected two fine buildings during 1889. The Library Building, erected at a cost of $40,000, is of limestone and Trenton brick with terra-cotta trimmings. It has abundant room for library appliances and shelving in the stack room for 135,000 volumes. The John Crouse Memorial College Edifice, built and furnished by the late Mr. John Crouse, and his son Mr. D. Edgar Crouse, is of Long Meadow red sandstone, with granite

foundations. It is four stories high, 162 by 190 feet. The amount expended upon the structure was $450,000.

Mount Union College, Alliance, Ohio, reports the erection of the Morgan Gymnasium at a cost of $10,000. It is 50 by 80 feet and built of brick. The basement contains bath rooms, lockers, bowling alley, and base ball cage. The main floor is devoted to gymnastic performances of all kinds, while in the second story there is a roomy, running gallery.

Calvin College, Cleveland, Ohio, has acquired and equipped Pestalozzi Hall, a large new building for the preparatory department.

Ohio State University, Columbus, Ohio.—The Electrical Laboratory, a two-story brick building, 75 by 45 feet, was erected in 1889. The first floor contains the engine and dynamo room, office, and washroom. On the second floor are a lecture room, a photometric room, a library room, and three measurement rooms. The building and its outfit are valued at $16,000. The Chemical Building was completed in 1890, and is occupied by the departments of general chemistry, agricultural chemistry, mining and metallurgy, and pharmacy. It is a two-story and basement brick building, 179 by 132 feet. The building and contents cost about $62,000.

The University of Oregon, Eugene, Oregon, erected a new building to be used as a gymnasium. It is built of brick and cost $4,500.

Pennsylvania College, Gettysburg, Pa.—The Recitation Hall, completed in 1889, contains on the first floor, library room and office, president's office, reception and recitation rooms. The second floor has recitation rooms. The third floor contains a museum room, mineralogical laboratory, infirmary, and two society halls, while the basement is designed for a physical laboratory. Brua Memorial Chapel was erected in 1889-90, and is used for morning chapel service, commencement exercises, lectures, and other occasions requiring a large audience room.

Bucknell University, Lewisburg, Pa., reports the erection of two new buildings. Bucknell Laboratory is 43 by 86 feet and has two stories above the basement. On the first story are a lecture room and a working room for individual work in chemical analysis; the second floor contains a lecture room and one room each for quantitative and qualitative analysis; the basement has a dark room for photometry, a room for applied chemistry, another for electricity, and a fireproof room. The Tustin Gymnasium is built of brick and stone, and contains, in the basement rooms for lockers, wardrobes, dressing rooms, shower baths, furnaces, and coal. The second story rises 22 feet from the main floor to the square and is open to the roof. At the height of 12 feet a running track gallery, 6 feet wide, surrounds the room.

The *University of Pennsylvania*, Philadelphia, Pa., reports the erection of a large library building. The storage capacity is for 350,000 volumes, but the book stack admits of indefinite extension. The building is fireproof, and the plans for the erection of it were subjected to severe criticism and were widely altered in many respects before final adoption.

The Young Men's Christian Association of the *University of Tennessee* has erected a handsome separate building for the association. The building is a substantial structure of pressed brick and stone, covered with slate, and was planned with special reference to its uses. The building affords ample facilities for physical culture and is equipped with a complete set of standard gymnastic apparatus.

Carson and Newman College, Mossy Creek, Tenn., reports the erection, in 1890, of a college building costing $20,000.

Fisk University, Nashville, Tenn., reports the erection of a gymnasium and workshop. The gymnasium is furnished with apparatus both for the young men and for the young women.

University of Texas, Austin, Tex.—Brackenridge Hall, to be used as a club house, was erected in 1890 at a cost of $16,000. It is a hall for students, containing lodging rooms and a restaurant. The building is of brick, trimmed with stone, and is four stories high. Besides the large dining room, kitchen, etc., the building contains twenty-four rooms, each 22 by 15 feet. The erection of the central building in 1889 at a cost of $75,000 is also reported.

The *University of Vermont*, Burlington, Vt., reports the completion of the Billings Library at a cost of $153,000. The building has a shelving capacity of 100,000 volumes and contains the general library of the university and the special collections. Three new houses for professors were erected in 1889-90 at a cost of $12,000 each.

Randolph-Macon College, Ashland, Va., has erected a new Science Hall costing $10,000, to be used for lecture rooms and laboratories for practical work in physics and biology.

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Three buildings were erected in 1889 by *Emory and Henry College*, Emory, Va. The William Morrow Science Hall contains a chemical lecture room, chemical laboratory, physical lecture room, cabinet of minerals and fossils, apparatus room, room for chemical calculus, etc. The Sam W. Small Gymnasium is a large octagonal building constructed with reference to a double use, viz, during the session, for bodily exercise, and at the close, as a public auditorium. Its seating capacity is about 1,600. Byars House is the college boarding house and hotel. Students are not allowed to room in this building, as the rooms are kept for hotel purposes. The third floor of the building is occupied by two society halls.

Washington and Lee University, Lexington, Va., reports the erection of a gymnasium. No particulars are given.

West Virginia University, Morgantown, W. Va., reports the erection of a new hall to be used as an armory, gymnasium, and commencement hall.

Beloit College, Beloit, Wis., reports the completion of Scoville Hall at a cost of $25,000. This building is for the use of the preparatory department.

MISCELLANEOUS NOTES.

The *College of St. Augustine*, Benicia, Cal., reports that it was suspended during 1889-90 on account of the murder of the vice-president of the college by two students who were refused their diplomas, having been found deficient in mathematics.

Wesleyan University, Middletown, Conn., reports the organization of a department of English language.

Moore's Hill College, Moore's Hill, Ind., established a normal school simultaneously with the abolishment of the De Pauw Normal School.

Kentucky University, Lexington, Ky., was opened to women in 1889. The president says that coeducation has proved a success with them.

Kentucky Classical and Business College, North Middletown, Ky.—The building with its contents was burned in November, 1889, and will not be rebuilt at present.

Kentucky Wesleyan College has been removed from Millersburg to Winchester, where new buildings have been erected.

The trustees of the *University of Mississippi* have decided to establish a department of pedagogy.

Trinity College, North Carolina.—In March, 1890, Mr. Washington Duke, of Durham, N. C., offered to give $85,000 to the college in building and endowment, and Mr. J. S. Carr agreed to donate a magnificent tract of 63½ acres of land lying on the west of Durham as a site on condition of the removal of the college to that city. These offers were promptly accepted and buildings are now in course of erection. The main building to cost $50,000 will be three stories high and will have a main front of 200 feet long and 50 feet wide, with two end wings, extending 50 feet back. This building contains 60 dormitories, each consisting of a bedroom and study, 12 lecture rooms and offices, laboratories for the use of the professors, apartments for assistants and employés, and a basement under the entire building. The technological building contains separate apartments for the manual training school, the schools of civil, mechanical, and electrical engineering, two laboratories, two lecture rooms, a carpenter shop, machine shop, and a blue print and photographer's room. The Dining Hall and Chapel contains on the first floor, a dining hall with a capacity of 200 seats, and the second floor a chapel with a capacity of 500. The gymnasium is 80 by 40 feet, and will be furnished with good gymnastic appliances. In addition to the foregoing buildings there have been erected a laundry building and seven residences for the faculty and officers.

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CHAPTER VI.

LENGTH OF COLLEGE CURRICULUM.

Introduction—Reduction of Course Recommended in the Interest of Medical Students—Average Age of Freshmen—Increased Requirements for Graduation (Course of Study in Yale, 1824–25 and 1890–1891)—Average Age of Freshmen at Harvard—Method of Computing Average Age at Harvard—Remarks and Opinions of Prominent Educators: President Eliot and the Action of the Harvard Faculty—Ex-President Andrew D. White, of Cornell—President Gilman, of John Hopkins—Action of Columbia College—President Adams, of Cornell—President Angell, of University of Michigan—President Hyde, of Bowdoin—President Capen, of Tufts—President Warren, of Boston University—President Andrews, of Brown University—Mr. George L. Fox, of Hopkins Grammar School—Prof. Tracy Peck, of Yale—Significance of the A. B. degree.

INTRODUCTION.

The subject of higher education has been so ably discussed and set forth during late years by the leading college men of the country that it will be profitable to reproduce here some of their remarks.

Prominent among the subjects which have engaged attention is that of shortening the time required to complete the college course. The proposition took practical shape in the attempt made by the faculty of Harvard College to reduce the time required for obtaining the A. B. degree.

This attempt was made in the interest of those students who, after completing a college course take a full four years' course in medicine. By the method now in practice the average age at graduation of such students, according to President Eliot, is between 26 and 27 years. That this is an evil and that something ought to be done to remedy it is generally admitted; but considerable opposition has been developed to the propositions advanced with this end in view, more especially by the smaller colleges of the country. To these institutions the abridgment of the course would mean, for some time at least, a diminished attendance and consequently a diminished income from tuition fees, while to replace this loss a larger increase in the productive funds of the colleges would be required than there is any reasonable hope of obtaining.

The Harvard plan of shortening the course is given farther on. Another and less radical measure looking to the accomplishment of the same purpose as the shortening of the college course has been proposed. This plan allows seniors to elect the first year studies of the professional department which they propose to enter; but this plan, it is evident, can be adopted only by those institutions which have professional departments in close proximity to the college.

Age of freshmen.—Before giving the views of college presidents on this subject it may be well to consider the age of college students. An inquiry on this subject was addressed by this Office to the colleges and universities of this country, 220 of which have returned fairly satisfactory answers. The inquiry was worded as follows: "How does the average age of the members of the freshman class in your institution compare with the average age ten years ago?"

Of the 220 institutions replying, 102 reported the average age as being the same as ten years ago; 65 reported a lower average, and 53 a higher average. Of the 65 institutions in the second category 52 give the age as "slightly lower," or "less than one year;" 9 report it as being between one and two years lower, and 4 report it as between two and three years lower. Of the 53 that report the age as higher, 36 say it is slightly or less than one year higher, 12 report it as being between one and two years higher, and 5 report it as between two and three years higher. But we must not lose sight of the fact that in a large number of these institutions the requirements for admission have been raised considerably

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during the last ten years, which would naturally have a tendency to raise the age at admission, provided no improvement had been made at the same time in the secondary schools preparing for the colleges. Of the 220 institutions answering the inquiry as to the age of their students, 81 say that the requirements for admission have been raised; and of these 81 institutions the standard of 54 has been raised without increasing the age; in fact, 23 of these 54 institutions say that the age is lower than ten years ago. The requirements for admission have been raised in 27 of the 53 institutions that report the age as having increased, and it may be well to note the fact that of the 12 institutions in the North Atlantic Division reporting an increased age, 10 show an increase in the requirements for admission.

The foregoing information, summarized by States, is given in the following table.

Average age of freshmen as compared with the average age ten years ago.

States.	Number of schools reporting.	Number reporting the age as—			Number in which the requirements for admission have been raised, and reporting the age as—		
		Same.	Lower.	Higher.	Same.	Lower.	Higher.
United States	220	102	65	53	31	23	27
North Atlantic Division	41	22	7	12	9	3	10
South Atlantic Division	36	14	9	13	3	1	5
South Central Division	36	15	11	10	2	1	4
North Central Division	94	42	35	17	13	18	8
Western Division	13	9	3	1	4		
Alabama	3	1	1	1	1		1
Arkansas	2		2				
California	4	2	1	1			
Colorado	2	1	1				
Connecticut	3	1		2			2
Delaware	1	1					
District of Columbia	2	2			1		
Georgia	7	1	3	3			1
Illinois	21	13	5	3	6	1	1
Indiana	8	1	4	3		3	1
Iowa	11	3	6	2	1	6	2
Kansas	3	1	1	1			
Kentucky	7	1	3	3		1	2
Louisiana	4	1	2	1			
Maine	3	2	1		1		
Maryland	6	2	3	1			
Massachusetts	4	1	3				
Michigan	5	2	3			1	
Minnesota	4	1	3			1	
Mississippi	3	2		1			
Missouri	13	5	6	2	1	1	2
Nebraska	2		1	1		1	1
Nevada	1	1			1		
New York	15	9	1	5	3	1	3
North Carolina	7	2	2	3		1	1
Ohio	21	12	6	3	3	4	1
Oregon	4	3	1		2		
Pennsylvania	14	7	2	5	4	2	5
South Carolina	7	3		4	1		2
Tennessee	15	8	3	4	1		1
Texas	2		2				
Vermont	2	2			1		
Virginia	5	2	1	2			1
Washington	2	2			1		
West Virginia	1	1			1		
Wisconsin	6	4		2	2		

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Increased requirements for graduation.—A comparison of the following courses of study in Yale College for the years 1824-25 and 1890-91 will give some idea of the increased requirements for graduation in this country.

1824-25.

FRESHMAN CLASS.

First term.—Livy, two books; Adams' Roman Antiquities; Webber's Arithmetic reviewed; Day's Algebra begun.

Second term.—Livy continued through five books; Græca Majora; Xenophon's Cyropædia and Anabasis; Day's Algebra finished.

Third term.—Græca Majora, Herodotus, Thucydides, Lysias, and Isocrates; Morse's Geography; Murray's Grammar.

SOPHOMORE CLASS.

First term.—Horace, Odes and Satires; Græca Majora, Demosthenes, and Xenophon's Memorabilia; Playfair's Euclid, six books.

Second term.—Euclid finished and reviewed; Horace finished and reviewed; Græca Majora, Plato, and Aristotle; Day's Mathematics; Plane Trigonometry; Nature and Use of Logarithms; Mensuration of Superficies and Solids, and Isoperimetry.

Third term.—Græca Majora, Vol. I finished; Cicero de Officiis, de Senectute, and de Amicitia; Day's Mathematics, Mensuration of Heights and Distances, Navigation and Surveying; Dutton's Conic Sections and Spherical Geometry; Jamieson's Rhetoric.

SOPHOMORE CLASS—continued.

JUNIOR CLASS.

First term.—Cicero de Oratore; Homer's Iliad, Robinson's; Dutton's Spherical Trigonometry; Enfield's Philosophy, four books.

Second term.—Tacitus; The History de Moribus Germanorum and Agricola; Græca Majora, Vol. II; Sophocles and Euripides; Enfield's Philosophy finished and reviewed.

Third term.—Enfield's Astronomy; Lyttet's History; Vince's Fluxions; Græca Majora, Vol. II continued, or Hebrew.

SENIOR CLASS.

First term.—Blair's Rhetoric; Hedge's Logic; Locke's Essays.

Second term.—Paley's Natural Theology; Stewart's Philosophy of the Mind.

Third term.—Paley's Moral Philosophy; Paley's Evidences of Christianity.

1890-91.

FRESHMAN CLASS.

Greek.—Homer's Odyssey, five books; Xenophon's Hellenica; Herodotus, seventh book.

Latin.—Livy, Books XXI and XXII; Tusculanæ Disputationes, De Amicitia, and De Senectute of Cicero; Satires of Horace; Prose Composition; History of the Roman Republic.

French or German.—Three hours a week throughout the year. Students may at their option either continue the study of the modern language presented for admission or begin the study of German in case they have not previously pursued it.

Mathematics.—In Geometry: Planes, polyhedrons, cones, cylinders, and spheres. Projection of figures with exercises on models (Chauvenet).

Plane Trigonometry: Solutions of Triangles, Mensurations, and Surveying (Richards); Trigonometric Analysis (Case).

Algebra: The geometrical interpretation of the Theory of Equations, Imaginaries, and the Solution of Higher Equations (Phillips and Beebe).

Oriental History.—One hour a week. A general view of Egyptian, Assyrian, and Babylonian and Persian history, with special reference to Biblical and classical history.

SOPHOMORE YEAR.

Greek.—Sophocles' Antigone and Electra; Euripides' Medea; Thucydides, first book; Isocrates' Panegyric; Plato's Apology.

Latin.—Pliny's Letters; Agricola and Germania of Tacitus; Odes and Epodes of Horace; Menæchmi of Plautus; Andria and Adelphi of Terence; sight reading.

Modern Languages.—Advanced French or German, two hours a week.

Mathematics.—Trigonometry: Spherical Trigonometry; Applications to Navigation and Astronomy (Richards).

SOPHOMORE YEAR—continued.

Analytical Geometry: Plane and Solid, with application to map projection (Loomis).

Mechanics.—Kinematics, Kinetics (or Dynamics), and Statics (Dana).

Astronomy.—Loomis.

English.—Half year, readings in Addison, Lamb, De Quincey, Macaulay, Ruskin, and Arnold; half year, compositions connected with the theoretical study of rhetoric.

Compositions.—Throughout the year.

JUNIOR AND SENIOR YEARS.

The prescribed courses of junior year occupy six hours per week, and those of senior year two hours per week. In addition, each member of the junior class is required to select nine hours per week and each member of the senior class thirteen hours per week from a list of elective courses.

PRESCRIBED STUDIES OF JUNIOR YEAR.

Physics.—Ganot's Physics: First term, liquids, gases, sound, and light, and part of the subject of heat; second term, heat, electricity, and magnetism.

Logic.—Jevons's Logic; Fowler's Inductive Logic; lectures.

Psychology.—Porter's Elements of Intellectual Science; lectures.

Ethics.—Porter's Elements of Moral Science.

Theism and Evidences of Christianity.—Lectures.

PRESCRIBED STUDIES OF SENIOR YEAR.

Philosophy.—One course of two hours per week in psychology, ethics, or history of philosophy.

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Average age of freshmen at Harvard.—The following table showing the age of freshmen at Harvard College is taken from the report of the president of that institution for the year 1889-90:

Age of students who entered the freshman class of Harvard College, 1856-1890, inclusive.

Year.	14-15.	15-16.	16-17.	17-18.	18-19.	19-20.	20-21.	21-22.	22-23.	23-24.	24-25.	25-26.	26-27.	27-28.	28-29.	29-30.	30-31.	32-33.	44-46.	Average age.	No. admitted.a
																				Yrs. M.	
1856	4	16	44	34	29	7	1	4	----	3	----	2	----	----	----	----	----	----	----	17 7$\frac{1}{4}$	144
1857	----	6	31	27	25	8	3	3	----	5	----	----	----	----	----	----	----	----	----	17 11$\frac{1}{4}$	108
1858	----	7	23	43	30	11	3	2	2	3	----	----	----	----	----	----	----	----	----	17 11$\frac{1}{2}$	124
1859	----	6	26	56	31	14	5	3	1	1	1	----	----	----	----	----	----	----	----	17 11	144
1860	----	9	26	38	33	14	9	1	4	2	----	----	----	----	----	----	----	----	----	18 1$\frac{1}{4}$	136
1861	----	3	24	50	23	13	3	5	1	2	----	----	1	----	1	----	----	----	----	18 1$\frac{1}{2}$	126
1862	----	2	19	41	30	15	10	3	2	----	----	----	1	----	----	----	----	----	----	18 3$\frac{1}{4}$	123
1863	1	2	22	33	26	13	5	7	----	2	----	----	1	----	1	----	----	----	----	18 4$\frac{1}{2}$	128
1864	1	----	14	30	18	19	6	3	1	2	1	----	----	----	1	1	----	----	----	18 9$\frac{1}{4}$	97
1865	----	5	19	51	28	23	9	1	5	----	1	----	1	----	----	----	----	----	----	18 3$\frac{1}{4}$	143
1866	----	6	19	38	46	23	8	----	3	1	----	----	----	----	----	----	----	----	----	18 2$\frac{1}{2}$	144
1867	----	----	22	56	55	24	7	9	3	1	1	----	----	----	----	----	----	----	----	18 5$\frac{1}{4}$	178
1868	----	----	16	48	37	22	13	2	1	2	----	----	----	----	----	----	----	----	----	18 5$\frac{1}{2}$	141
1869	----	2	15	49	52	22	11	6	----	----	----	----	1	1	----	----	----	----	----	18 5$\frac{1}{2}$	159
1870	----	3	19	76	53	29	11	4	4	1	1	----	1	----	----	----	----	----	----	18 4$\frac{1}{2}$	203
1871	----	6	24	59	62	28	16	4	1	1	----	----	----	----	----	----	----	----	----	18 3$\frac{1}{4}$	201
1872	----	2	20	51	65	29	12	4	2	1	----	----	1	----	----	----	----	----	----	18 5$\frac{1}{2}$	198
1873	1	2	19	52	76	43	17	11	3	4	2	5	----	1	----	----	----	----	----	18 10$\frac{1}{2}$	236
1874	1	2	19	61	58	42	7	4	1	2	2	2	----	1	----	----	----	----	----	18 6$\frac{1}{2}$	202
1875	1	1	12	78	93	49	10	7	3	4	----	----	----	----	----	----	----	----	----	18 6$\frac{1}{2}$	258
1876	----	1	12	58	60	53	20	7	2	2	1	----	1	----	----	----	----	----	----	18 9	217
1877	----	2	16	52	80	53	23	9	6	3	1	----	----	----	----	----	----	----	----	18 9$\frac{1}{2}$	245
1878	----	2	14	52	78	45	22	7	9	----	1	----	----	----	----	----	----	----	----	18 9$\frac{1}{4}$	230
1879	----	1	16	49	86	53	19	15	4	1	1	1	1	----	----	----	----	----	----	18 11	248
1880	----	1	12	52	84	53	24	9	3	4	1	2	1	1	----	----	----	----	----	18 11$\frac{1}{2}$	247
1881	----	3	10	38	73	55	31	10	6	1	1	----	----	----	----	----	----	----	----	19	230
1882	1	3	11	58	89	60	28	12	4	5	1	2	----	----	----	----	----	1	----	19	275
1883	----	----	17	65	100	61	23	7	7	2	2	1	----	----	----	----	----	----	----	18 9$\frac{1}{4}$	285
1884	1	----	12	63	90	72	29	8	4	1	5	1	----	----	----	----	----	----	----	18 10$\frac{1}{2}$	286
1885	2	----	10	63	89	56	40	6	4	4	1	2	----	----	----	1	1	1	*b*1	19 1$\frac{1}{4}$	281
1886	----	4	14	64	116	67	29	12	3	3	2	1	2	2	----	----	2	----	----	18 11$\frac{1}{2}$	321
1887	----	----	8	70	109	87	26	8	12	2	2	3	4	1	----	----	1	----	*c*1	19 2$\frac{1}{4}$	334
1888	----	----	13	58	115	65	32	15	5	3	4	1	1	1	----	----	1	----	----	19 1$\frac{1}{2}$	314
1889	----	1	13	65	112	83	28	8	3	4	4	1	----	2	1	1	----	----	----	19 $\frac{3}{4}$	321
1890	----	----	11	59	119	85	27	15	1	3	3	1	----	----	1	----	----	----	----	19 $\frac{1}{2}$	325

a On the assumption that all who ever joined each class were admitted as freshmen. *b* 45 years old. *c* 44 years old.

From this table it would appear that the average age has been increased in thirty-four years by a little more than seventeen months. But let us inquire into the manner of arriving at these results. The secretary of Harvard University, in a communication received August 16, 1890, gave the average age of the freshman classes for the last ten years as follows:

	Years.	Months.		Years.	Months.		Years.	Months.
1880	18	11$\frac{3}{4}$	1884	18	9$\frac{7}{10}$	1888	18	11$\frac{3}{4}$
1881	19	----	1885	18	10$\frac{1}{2}$	1889	18	11$\frac{1}{2}$
1882	19	----	1886	18	11$\frac{3}{4}$	1890	18	9$\frac{1}{2}$
1883	18	9	1887	18	11$\frac{1}{4}$			

As the figures in the president's report did not agree with those given by the secretary, a letter was written to the latter asking him which of the two sets of figures should be used in the compilations of the Bureau. The following reply was received March 5, 1891:

"The table in the President's report is the best authority, as it contains all recent changes and corrections in the age statistics.

"The most marked changes are due to the embodying in the figures of persons entering the classes of 1890, 1891, 1892, and 1893 (*i. e.*, the freshman classes marked 1887, 1888, 1889, and 1890) with advanced standing. For example: If a man comes from Yale or Amherst after graduation and enters our senior class

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his age is added to the freshman table of that class as though he had entered three years earlier as a freshman.

"As 73 men were admitted to advanced standing this year, you can readily see that the chance of change in the average is very strong. * * * From what I have said you will see that the present figures for 1888, 1889, and 1890 will change slightly until the classes of '92, '93, and '94 have been graduated."

Prior to 1873 the catalogues of Harvard do not show the presence in the undergraduate department of students who had already taken the A. B. degree at some other college. In 1873 three such students were enrolled in the senior class, but the year when such degrees were received is not given until the year 1887. In order to show the number of such students in the different classes a rigid examination of the catalogues has been made, with the following results:

1873. Senior class, 3.
1874. Senior, 2; junior, 2.
1875. Senior, 5; junior, 1.
1876. Senior, 7.
1877. Senior, 5; junior, 1.
1878. Senior, 1; sophomore, 1.
1879. Not noted.
1880. Senior, 2.
1881. Senior, 6; junior 6.
1882. Senior, 9; junior, 6; sophomore, 1.
1883. Senior, 8; junior, 4; sophomore, 1.
1884. Senior 15; junior, 4.
1885. Senior, 8; junior, 6.
1886. Senior, 8; junior, 1; sophomore, 1.
1887. Senior, 1 (1883); 4 (1885); 3 (1886); 1 (1887).
1888. Senior, 2 (1887); 6 (1888); junior, 2 (1887); 4 (1888); sophomore, 1 (1885); 1 (1886).
1889. Senior, 1 (1880); 1 (1886); 2 (1887); 5 (1888); 4 (1889); junior, 1 (1887); 3 (1889); sophomore, 1 (1889).
1890. Senior, 2 (1887); 4 (1888); 7 (1889); 14 (1890); junior, 1 (1888); 1 (1887); 1 (1890); sophomore, 1 (1889).

The figures from 1873 to 1886, inclusive, have not much significance beyond giving the number of such students, inasmuch as the years when the students had received the A. B. degree are not given. In order to show to what an extent the aggregate age of the Harvard freshman classes are raised by the methods of computation employed by that institution, let us examine into the probable ages of students who had received the A. B. degree and were members of the senior class in 1889-90. By looking at the table above given we find that a member of that class had received his A. B. degree in 1880. Supposing that he was 22 years of age when he received his degree he would have been 31 years old when he entered the senior class of Harvard. According to the method of computation there, as given by the secretary, his age as a freshman at Harvard is used as 28 years, when really he was a freshman at some other institution ten years before and had never been in the Harvard freshman class. By means of such methods thirty-four years were added to the total of the ages of members of this freshman class by taking the ages of students who had already received the degree of A. B. elsewhere. In our investigations no note was made of students who had received a degree other than A. B. Of these there are quite a number; there are also students who had not taken a degree, but were admitted to advanced standing. Some idea of the number of such students in the different classes may be formed from the fact that in 1890 seventy-three students were admitted to advanced standing, while the catalogue shows the presence of but thirty-one students in the college who had already received the degree of A. B. at some other institution. The number of such students entering the undergraduate department of Harvard is constantly increasing, and this fact will of course have the tendency to continually increase the average age of the freshman classes as this is now being computed. Nor is it likely that a large number of the graduates who thus raise the age will ever pursue the study of either law or medicine, but are merely pursuing liberal studies and very likely fitting themselves to teach. Speaking of these students, the dean of the graduate school of Harvard says: "A large proportion of these students should properly be classed in the graduate school; but many of them have elected to enter the undergraduate department in order to avail themselves of Price Greenleaf aid and of scholarships which can be given only to students of the college."

From the above statement of the dean it would appear that these students are not actuated so much by the desire to obtain the Harvard A. B. as by the desire to receive Harvard aid for the purpose of pursuing post-graduate studies, and it seems that such students should not be included in the computations. The real average age of a freshman class is the average obtained from the ages while they are freshmen, and the average age of a senior class should be obtained by adding the ages of the members of the class and dividing it by the number of members in the class, and not by adding four years to the average age of the freshman class, for a sufficient number of students might have been dropped to change

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materially the average age. From these statements and explanations it will be seen that in comparing the age of the Harvard freshman class with that of other institutions it must be borne in mind that the methods of computation employed by Harvard are different from those generally used, and the result does not represent the age of the freshman class as such.

Having shown that the increase in the average age of freshmen during at least the last decade is not general, as proved by the facts collected from the colleges throughout the country, we will now proceed to set forth the views of the most prominent educators upon the length of the college course and the propriety of reducing it. In collecting these expressions of opinion, an effort has been made to present it from every point of view. It is a matter of great regret that the opinions from the smaller institutions are so few. This is owing to the very small number of such institutions that publish the annual reports of their presidents. It is in these reports, and not in the general reports or catalogues, that remarks and recommendations upon subjects pertaining to general college matters are as a rule found.

PRESIDENT ELIOT AND THE ACTION OF THE HARVARD FACULTY.

The first remarks of President Eliot of Harvard on this subject appear in his annual report for 1885–86, where he calls attention to the comparatively advanced age at which graduates of colleges and scientific schools begin the study of medicine. In connection with this subject he says: "The average age at which Harvard graduates get the degree of A. B. is about 22 years and 7 months. If such bachelors of arts then spend four years in the study of medicine, they are 26 years and 7 months old when they are ready to begin the practice of their profession. The faculty consider this unreasonable postponement of entrance into practice a serious evil, which it is their duty to combat, since more than half of their students—and that much the best half—are graduates of colleges or scientific schools. They therefore laid before the academic council in June last a plan for the abridgment of the college course by those students who go from college directly into one of the professional schools of the university."

The medical faculty proposed that the first-year studies of the medical school be counted, under certain conditions, for the degree of A. B., which proposal was concurred in by the law faculty. This would have resulted in shortening the college course by one year for students who should pursue their professional studies to the full limit in the Harvard schools. The general subject of shortening the college course was then (December, 1887) submitted to a committee of nine professors, appointed by the president, who were to consider the subject in all its relations. No report seems to have been made by the board when President Eliot made his annual report for 1888–89, in which he again says: "Wherever the fault and whatever the remedy, it is clear that the degree of bachelor of arts is taken in the United States later than in any other country in which the degree is used, and too late for the best interests of the individuals who aspire to it and of the institutions which confer it."

On account of the pressure of other matters the college faculty was unable to give this subject full consideration until the year 1889–90, when eighteen meetings of the faculty, from November to March, were spent in its discussion. At last, March 25, 1890, the following was communicated to the president and fellows by vote (not unanimous) of the faculty:

"The faculty desires to modify its present regulations in accordance with the following propositions:

"1. That the requirements for the degree of bachelor of arts be expressed under suitable regulations with regard to length of residence and distribution of work, in terms of courses of study satisfactorily accomplished.

"2. That the number of courses required for the degree be sixteen.

"3. That when a student enters college there shall be placed to his credit, towards satisfying the foregoing requirements of sixteen courses, (1) any advanced studies on which he has passed in his admission examination beyond the number required for admission and (2) any other college studies which he has anticipated.

"4. That a student may be recommended for the degree of bachelor of arts in the middle as well as at the end of the academic year.

"In case the measures here proposed shall be adopted, it is the purpose of the faculty to encourage the anticipation of college studies by students at the time of their admission and to facilitate the attainment of the degree of bachelor of arts in less than four years.

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"The faculty further proposes to advise parents and teachers that eighteen years is a suitable age for entering Harvard College."

A comparison of these propositions with the present requirements for the degree of bachelor of arts shows that, though the faculty does not, in so many words, advocate the reduction of the course from four to three years, it proposes by a slight reduction in the requirements to make it possible for close or diligent students to attain the degree in three years. The requirements for the degree at present are 18.2 courses and in three years the student completes at least 14.2 courses; so that, if the proposition to reduce the requirements to sixteen courses should be adopted and the conditions should remain the same, the student will complete the course in about three and one-half years, though, by anticipating some studies or by taking extra courses, as is frequently done even now, hard-working students would be enabled to complete the course in three years. It is to be remarked, however, that, although under the present conditions it is possible for students to complete the course in three years, very few have thus far accomplished it. According to the report of the dean of Harvard College for the year 1889-90 the number so completing the course during the last ten years was twenty-seven,[1] ten of whom graduated in 1890.

In the same report the dean says: "Among the great mass of the present students there is unquestionably a sentiment in favor of the traditional four years' course. If it should be made possible by moderate exertion to graduate in three years, there is nothing in the present attitude of the students to indicate that the majority would restrict their liberal training to this three years' minimum, any more than they are disposed to confine themselves to the minimum requirement of courses in any year. And these facts may well reassure those who fear that a general lowering of the standard of education would result from the adoption of the faculty's proposals." Another point that the dean emphasizes is that even if the course be reduced as proposed the standard of the degree will still be considerably higher than it was twenty years ago.

At the meeting of the Board of Overseers, October 8, 1890, the committee, to whom these propositions had been referred, submitted its report—only a qualified approval of the suggested changes—which was laid over for future action. The following are the principal recommendations made by the committee:

"*Voted*, That the Board of Overseers concurs with the corporation in the approval of the fourth proposal of the college faculty: that a student may be recommended for the degree of bachelor of arts in the middle as well as at the end of the academic year.

"*Voted*, That the Board of Overseers concurs with the corporation in its approval of the third proposal of the college faculty, provided it be amended by striking out the words 'the foregoing requirement of sixteen courses' and substituting therefor the words 'the requirements for the degree of bachelor of arts;' so that it shall read as follows: 'That when a student enters college there shall be placed to his credit towards satisfying the requirements for the degree of bachelor of arts any advanced studies on which he has passed in his admission examination beyond the number required for admission and any other college studies which he has anticipated.'

"*Voted*, That the Board of Overseers does not concur with the corporation in its approval of the first and second proposals of the college faculty: that the requirements for the degree of A. B. be expressed under suitable regulations with regard to length of residence and distribution of work in terms of courses of study satisfactorily accomplished; that the number of courses required for the degree be sixteen.

"*Voted*, That the Board of Overseers recommends the modification of the present regulations of the college faculty in accordance with the following proposition: That a senior intending to enter the medical school and to take the full four years' course therein may, under proper supervision, include in the requirements for the degree of bachelor of arts the courses on physiology and anatomy required in the first year of the medical school, each of said courses to count as one full elective course."

The committee thinks that if any time is lost it is in the preparatory schools, where considerable attention is given to athletics, etc.

The Board of Overseers, at a meeting in April, 1891, finally decided to reject all the proposals of the faculty.

[1] This includes, of course, only those students who entered as freshmen and completed the course in three years.

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EX-PRESIDENT ANDREW D. WHITE.

Andrew D. White, LL. D., in an article entitled "The future of American universities," published in the North American Review for October, 1890, urges the reorganization of our college and university system. He calls attention to the very large number of colleges and universities in this country, especially to the number of small colleges with still smaller endowments, which possess all the powers of universities[1]. Although Dr. White does not expressly recommend the shortening of the college course, his plan for the reorganization of our university system would nevertheless accomplish that purpose, as well as reduce the age of college graduates. His plan is as follows:

"Let institutions of small endowment, whether called colleges or universities, frankly take their rightful positions; let them stop claiming to do work which their authorities know well that they can not accomplish in competition with the largely endowed universities. Let them accept the situation and begin their freshman year two years earlier than the present freshman year at most of the better colleges; that is, let them put their roots down into the great public-school system of the country and draw copiously from it. A course of instruction thus formed would begin with the beginning of the higher arithmetic, algebra, geometry, the principal modern languages, the elements of the natural sciences, and, for those who wish to study them, one or more of the ancient languages.

"Next, let this course in the intermediate college be continued up to the point which is at present reached, as a rule, in our colleges and universities of a good grade at the beginning of the junior year. After its four years' work, let the college bestow its diplomas or certificates upon its graduating classes and then let those who desire it be admitted into the universities upon the presentation of these certificates and diplomas.

"Next, as to the universities. In these let there be courses of advanced study, general, professional, or technical, covering, we will say, three years, and graduating men into the various professions."

According to this plan the degree of bachelor would be received two years earlier than it is at the present time. But let us see what effect this would have upon the significance of the degrees. At the present time some of the large institutions that confer the degree of doctor of philosophy demand three years of study after receiving the bachelor's degree and none demand less than two years; while, according to Dr. White's plan, but one year's study in addition to the time now required for the bachelor's degree would suffice for the attainment of the PH. D. degree.

PRESIDENT D. C. GILMAN.

Johns Hopkins University, Baltimore, Md., has for some time been maintaining courses of study leading to the degree of bachelor of arts and which were designed to be completed in three years. In view of this fact, it might easily be expected that President Gilman would be an enthusiastic advocate of the shortening of the college curriculum, but, as will be seen, he is very conservative on this subject. In an article entitled "Shortening the college curriculum," published in the Educational Review for January, 1891, he says:

"No general conclusion can be quickly reached on such a question. It must be settled in each institution according to its own circumstances. It must be tried in the local court before it is submitted to the court of appeals: that is, to the public. It does not follow that if one institution, even the strongest and most influential, decides to shorten its course, others will likewise do so. * * *

"The curtailment of the curriculum is chiefly urged for this reason: The number of persons who proceed to professional schools after taking a college course is much smaller than it should be; it is diminishing; and those who pursue a collegiate and then a professional course postpone till too late a period the actual business of life. For all such persons a year of preparatory work can well be spared."

Farther on he says: "As remedial agencies for this acknowledged difficulty I make the following suggestions:

(*a*) The authorities in our educational system should really, as well as nominally, distinguish between the requirements of three scholastic periods, namely:

[1] The chief blame for this condition in our country rests with the legislatures of the several States which grant these powers to institutions without defining the qualifications to be demanded for the attainment of degrees.

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The school, the college, and the university; or, in other words, between what is essential, what is liberal, and what is special in a prolonged education.

(*b*) The period of college life, which of late years has been carried forward so that it extends on the average from 18.5 years to 22.5 years (in many, perhaps, most of the older colleges), may be brought back to an earlier age, say, from sixteen to twenty years.

(*c*) The significance of the baccalaureate degree should be restored, so that it may be, at least, a trustworthy certificate, an approximate measure, both of the capacity and of the acquisitions of the possessor. In one way or another a consensus should be reached as to the dignities, rights, and privileges to that degree appertaining.

(*d*) The rigidity of the class system should be relaxed, so that those who are exceptionally favored or exceptionally strong may, if they choose, run the course in less than the average time, and likewise so that any who are embarrassed by ill health, the necessity of earning a support, or the inadequacy of their early opportunities may spend more than the usual time without any implied discredit, indeed without attracting any attention.

(*e*) The enormous waste of time and energy at the school period, the time of preparation for college, must be stopped.

Dr. Gilman says that the result of the adoption of these remedies would be that school life would usually end at sixteen years of age, college life at twenty, and the young man would receive his professional certificate or his diploma of doctor of philosophy at the age of twenty-three years or thereabouts.

He also says: "If then the stronger universities would take the ground that, as a rule, none should be admitted to the professional courses or to the freedom of university instruction until they had attained a bachelor's degree, or in some other way acquired a corresponding preparation for advanced work, the reproaches of which we are conscious would soon disappear, and higher education would be more generally diffused, more wisely ordered, and more serviceable to the public."

ACTION OF COLUMBIA COLLEGE.

Although Harvard may have been the first to call attention to the excessive age of those students who, after completing a college course, enter professional schools, Columbia College, New York, was the first to make provisions by which students can complete both courses at an earlier age. In order to accomplish this end an entire reorganization of the institution was rendered necessary. As a result of this reorganization,[1] seniors in the School of Arts may select as optional courses such courses under any university faculty as may be designated by said faculty as being open to seniors. The senior year is thus made the point of contact between the college and the university. President Low, in speaking on this subject, says: "This arrangement, while it has the advantage of maintaining the dignity of the faculty of the college proper as a degree-granting faculty, has the other undoubted advantage of making the bachelor's degree seem not so much the end of a student's course as, what it ought to be, merely an incident on the way to the true goal, the professional degree, or the degree of doctor of philosophy. While it in no way cheapens the bachelor's degree, it does shorten by one year the time required for the college and professional course combined."

PRESIDENT CHARLES KENDALL ADAMS, LL. D.

In his annual report for 1889–90, President Adams of Cornell University says there ought to be some means by which the work done in the last one or two years of the undergraduate course could be made to apply directly in the interests of those professional studies which students might desire to take up after completing their undergraduate work. After discussing the plan put in operation by Columbia College and that proposed by the faculty of Harvard University, he says:

"It is not my object in this connection to express an opinion in regard to either of these methods, but simply to point out that, whatever the weakness of either system may be, the substantially simultaneous efforts of two institutions as prominent as Harvard and Columbia to reduce the number of years necessary to complete the requirements for an advanced degree is one of unmistakable significance. The movement will unquestionably have not a little importance in influencing the development of higher education within the next few years."

[1] See p. 789.

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PRESIDENT JAMES B. ANGELL, LL. D.

President Angell of the University of Michigan has a few words to say on this subject in his last annual report. He remarks:

"It certainly is desirable, and I believe possible, to save some time in the education of the men who take four years' work in college and then their professional training. I am convinced that considerable time can be gained in the better arrangement of the work in schools. After the student is prepared for college, two plans for completing his education in briefer time than has usually been consumed are possible:

"First. Only three years of college work may be asked for the bachelor's degree. In that case the student must be required to do more work in each year than he has done heretofore in college, or the standard of attainment for graduation must be reduced.

"Second. Substantially the plan which we have followed for several years may be adopted. The condition of attaining the bachelor's degree is not meeting a requirement of time, but of work. One must complete so many courses of study, a part of which are fixed, a part elective. While in order to avoid cramming there is a limit to the number of courses which a student may undertake at once, still, with the liberty given, a capable and industrious man may easily meet the requirements for the degree of bachelor of arts in three and one-half years, and a few exceptionally strong men in each class may do it in three years. But in case they are within half a year of graduation at the beginning of their fourth year, we allow them to enter any one of our professional schools and continue half work in the literary department. Having planned their course in advance, they have always elected some studies—the law students, constitutional history; the medical students, biology and chemistry—which either form a part of the professional course or are closely allied to it. Thus they are able without overwork or cramming to complete the college course and the first year's course in the law school or the medical school. This plan, which has been followed several years, has worked on the whole satisfactorily. Of course, it could be followed only by a university which has upon the same grounds its collegiate and its professional departments."

But President Angell doubts the expediency of the reduction of the college course from four to three years by the University of Michigan on account of the effect it would have upon the standard of education in the West. In this connection he says: "Without assuming too much for ourselves, we can hardly doubt that if we made the proposed change our example would compel the smaller colleges in this region and probably tend to bring all State universities in the West to make the change also. One who is familiar with the range of work now generally done in the Western colleges and universities can hardly think that it would be beneficial to the West to reduce the standard of graduation by a year's study, at least until the requirements for admission are considerably raised."

PRESIDENT HYDE OF BOWDOIN.

The November (1891) number of the Educational Review contains an article entitled The Policy of the Small College, which was contributed by Rev. William De Witt Hyde, D. D, president of Bowdoin College, Brunswick, Me. This article coming from a man who is himself at the head of one of the smaller colleges is so suggestive that extracts therefrom are here reproduced. He begins his article as follows:

"Now that we have the germs, more or less developed, of eight or ten universities, the college must prepare to take second place in our educational system. To ape the university and try to spread over the whole field of higher education, or to be jealous of the university and set up as its rival, is equally absurd and suicidal. Its proper policy is to accept with modesty and self-respect its new position, and by losing the old life of self-sufficient independence to find the new life of membership in the highly differentiated educational organism of which the kindergartens are the feet and the university is the head.

"There are three classes of educated persons: First, those whose knowledge of reading, writing, arithmetic, grammar, geography, modern history, descriptive science, and their native language and literature enables them to do ordinary business, to enter good society, and to enjoy periodical and popular literature. Second, those whose knowledge of ancient and modern languages and literatures, higher mathematics, experimental science, political and economic history, psychology, ethics, and sociology enables them to grasp the principles

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of medicine, or law, or politics, or theology; to guide social progress and form public opinion; to enjoy the companionship of wise and good men of all lands and ages; and to appreciate the results in some department of scientific investigation or historical research. Third, those whose special training qualifies them to discover and interpret new truth within some chosen field of knowledge.

"To make scholars of the first class is the business of the school; to make scholars of the second class, and to discover and encourage those capable of entering the third class, is the business of the college; to train the chosen few who constitute the third class into full possession of productive powers is the business of the university."

The requirements for admission and the course of study to be maintained by the college are then discussed. He proceeds to show wherein the requirements for admission ought to be modified in order to bring the secondary schools and colleges into close connection. On this subject he says:

"The change is destined to become universal in the near future. As soon as the high schools are able to teach experimental science, French, and German as well as they now teach Greek and Latin, it will be the policy of the college to require for admission mathematics and English as at present; ability to read easy prose at sight in Latin, and either Greek, French, or German, and evidence of a thorough course in experimental science. We shall then have a considerable number of students fitting for college in the high schools, who will be for the most part in the same classes with the students who are not intending to enter college, instead of the small number who pursue a separate course, and thus receive an undue amount of the time of the teacher and an unjust proportion of the public school fund.

"This modification in requirement will necessitate some corresponding modifications in the course of study. It will be necessary to offer an elementary course in Greek, as well as in German and French, for those who wish to begin this study after admission to college. There should be a course in the history, literature, mythology, and archæology of Greece required of every student who has not studied the Greek language as a part of his preparatory or college course.

"The multiplication of highly specialized electives is not the province of the college. The expense is too great, and the profit to students at this stage too small.

"There are two fundamental lines of scholarly interest and two corresponding types of mind, the literary and the scientific.

"The college should, by its required courses, insure to every student an acquaintance with the first principles in both these fundamental lines of study. The college may wisely require of its candidates for a degree, ability to read both French and German, to write correct English, the elements of political and economic science, psychology, and ethics on the side of the literature and life of man, and higher algebra, geometry, and trigonometry, and the elements of chemistry, physics, and biology, on the side of mathematics and physical science.

"For the remaining half of the course sufficient electives should be offered to allow concentration on either literary or scientific studies, according to the taste and interest of the individual student.

"Such a readjustment of the conditions of admission and the course of study, together with improved methods of teaching in the lower schools, will allow pupils to enter college a year or two earlier than at present. No shortening of the course will be necessary. The difference between the best academies and high schools and those of inferior grade will express itself by the increased number of students who will enter college a year in advance.

"A. B. should be the ordinary college degree, and it should be given without reference to the precise nature of the course pursued. The degree means simply that the recipient is a liberally educated man. Attempts to discriminate between the educational value of courses of equal length and thoroughness in the same institution of liberal learning are relics of an educational superstition from which it is high time to emancipate ourselves.

"In order to encourage continued study during the year immediately following graduation the college is justified in granting the degree of A. M. to graduates who give evidence of having done the equivalent of a year's graduate study. Beyond this the college has no right to go. It owes to its undergraduates the full expenditure of its income and the full time of its professors, and if it attempts to divide its strength between graduates and undergraduates it does an injustice to both. It is the duty of the small college to drive away grad-

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uates who desire a prolonged course of systematic instruction to larger institutions, which make graduate instruction their main concern.

"The degree of PH. D. no more college has a right to confer, and the conferring of this degree by institutions which make no adequate provision for graduate instruction is the gravest breach of educational propriety."

PRESIDENT CAPEN, OF TUFTS COLLEGE.

The purpose of the Office being to present this subject impartially, the most strenuous objections that have been advanced to a change in the college course are here presented. The first of these is from President Capen, of Tufts College, who protests most vigorously against any reduction in the requirements for the degree.

In the course of his remarks on the subject he says: "Of course, if knowledge be substituted for discipline and culture: if the cramming process takes the place of those calm and thoughtful methods by which the intellect of man finds its most complete development, it is possible that many young men might cover the ground embraced by the college curriculum in three years. But if the attainment of the bachelor's degree is to be put within the reach of the majority of undergraduates in the shorter time by diminishing the courses of study now regarded as essential to it, few persons who have given attention to the subject will fail to esteem it as a lowering of the standard of general education."[1]

He does not agree with those who say that 27 is too advanced an age for a man to commence the practice of medicine. In connection with this he says: "It may well be asked who wants a stripling by the bedside of those whose lives are most precious to him?"

He also says that if the age of college graduates has been increasing in recent years it is due to the increase in the requirements for admission, and the remedy would be either to abridge these requirements or to so improve the facilities for secondary education that men may be brought to college at an earlier age. "For," says he, "if a youth has but seven years to give to study from the time he enters the secondary school until he receives the degree of bachelor of arts it is better that he spend three years in the fitting school and four years in the college than four years in the fitting school and only three years in the college."

PRESIDENT WARREN, OF BOSTON UNIVERSITY.

One of the leaders of the opposition in this matter is President Warren, of Boston University, who has done his utmost to arouse popular disapproval to the proposals of Harvard. His remarks have been given great publicity through the medium of the public press, so that but fragments thereof will be here presented. In an open letter to one of the overseers of Harvard University he says: "The scheme which I thought to propose is this: That every American classical college retain its present four-years' course, and simply notify all students of their successful completion of the junior year by conferring upon them at that point the title A. B. (Harv.), reserving the proper and legitimate A. B. as now for those who complete the entire course. This ought to satisfy Harvard, since it would greatly multiply the representatives of her ideas and standards, while, on the other hand, it would permit the other colleges to go on as usual, protecting and promoting the interests of liberal education, properly so called. This happy compromise seems to me so just and conservative of all interests that I take great pleasure in presenting it for your consideration and for the consideration of your distinguished colleagues."

Again, on October 31, 1890, the Boston Post contained a communication from Dr. Warren, from which the following is taken:

"As critical action is to be taken within a few days by the last of the governing boards of Harvard University, it may serve a useful purpose to set before the interested public a few pertinent facts and suggestions.

"First. The new measure now pending at Harvard makes no provision whatever for a compensative increase of the present requirements for admission to the freshman class.

"Second. The college is not understood to claim that its present requirements for admission are more exacting than those of any first-class American college. In fact, in consequence of their flexibility and of the provision for maxima and minima many a student now enters Harvard College who can not pass the en-

[1] Annual report of the president of Tufts College for 1889-90.

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trance examinations at Yale, Brown, Amherst, Wesleyan, and similar colleges. Few people seem to be aware of this fact.

"Third. The new movement aims to cut down the requirements for the A. B. degree to such a point that any apt and industrious student can acquire the degree of A. B. in three years. In point of fact, an exceptionally brilliant student, taking as many hours per week as some of the more hard-working frequently take, could finish the proposed sixteen courses and win the degree in two and a half years.

"Fourth. So far as yet appears, no effort is to be made to limit the present range of election allowed to the student, so that the A. B. degree on the new terms, as on those now in force, may be taken by persons whose entire undergraduate course is spent in Harvard, and yet who have never studied Latin, or Greek, or French, or German, or mathematics, or history, or philosophy, a single day in Harvard College.

"Fifth. The new proposal, if adopted, will make the Harvard A. B. the least significant and least valuable in New England. There is even danger lest the 'A. B. (Harv.)' become a byword.

"Sixth. No body of American students has ever asked for such a cheapening of the degree. Even at Cambridge the students are reported to have voted against it.

"Seventh. The Harvard alumni have never asked for the change, and many have expressed themselves in terms of the strongest opposition to it.

"Eighth. Still less have the American colleges, or any class of them, or any association representing them, asked for such a surrender as the proposals of the Harvard faculty contemplate. On the contrary, the authorities of every college in New England, if not in the United States, deprecate the movement as fraught with grave and far-reaching evils in all the colleges, Harvard included.

"Ninth. The fitting schools have not desired the change. On the contrary, nearly all yet heard from deplore even the discussion of so demoralizing a proposition.

"Tenth. Massachusetts, which has ever felt a special ownership and pride in Harvard College, has required no such action as that proposed. Had the legislature, five years ago, required it, how furious a storm of indignant opposition and expostulation would have raged from one end of the land to the other! Courts would have been appealed to, constituencies instructed, new legislators elected, to frustrate so pernicious a measure. Yet, *quod non fecerunt barbari, fecerunt barbarini*. What the Philistinian "rural members" did not do, that the faculty and corporation of Harvard are doing their best to accomplish.

"Eleventh. No ecclesiastical or religious body has called for the innovation. All the religious bodies, even to those which are popularly supposed to care least for culture, seem stoutly to oppose so needless and harmful a capitulation.

"Twelfth. The entire movement is self-originated in Harvard University, and herein, for the first time in all her noble history, Harvard appears before the American public and the world as the sole leader in a confessedly and disgracefully downward and backward movement in liberal education.

"On careful consideration of this matter, several questions suggest themselves—questions which the Harvard overseers and all custodians of the higher education should take time to investigate. For example, it has been jauntily assumed that the age of Harvard undergraduates is too high, and that the only problem is how to reduce it. Would it not be eminently appropriate for all concerned, first of all, to make a few inquiries like the following:

"1. Is it a fact that the majority of the youth entering Harvard and other colleges are any too mature for that self-direction in study now expected of them?

"2. Is it a fact that they are any too mature for that manly self-government in conduct now expected of them?

"3. If younger would their power of sustained and accurate abstract thinking be sufficiently developed within the limits of their course to enable them thoroughly to master the fundamental, philosophical, ethical, and sociological sciences as now taught?

"It has been assumed that the age of those entering our colleges is higher than it was fifteen years ago. Precisely the contrary is the truth in Boston University, and it might be well for all concerned in the discussion to inquire:

"4. Whether the age of the majority of students in college has not of late years steadily fallen in all or most of our classical colleges.

"It has been assumed that the growth of the higher education in our country has not kept pace with the growth of population, and the short-weight degree

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(which may also be spelled short-wait) has been represented as the only cure for the evil. As the first allegation does not accord with the results of my investigations, nor the second with my judgment, I venture to suggest two further questions:

"5. Whether the relative significance and power and growth of the higher education were ever as great in the United States as to-day. And

"6. In case they are not, whether the best way to cure the evil would be to raise up a larger crop of superficial and one-sided smatterers chiefly interested in obtaining the earliest possible chance for money-getting?

"It has been assumed that many of the students who now enter schools of medicine would first have taken an A. B. course, had this required but three years instead of four. As in all my life I have never yet learned of one such student, it might be well to institute another inquiry and to ascertain—

"7. Whether ten such students can be found in all the scores of medical schools in the United States taken together?

"It has been assumed that the required attendance upon college four years makes the collegiate medical students far older on graduation than they ought to be. Inasmuch, however, as the statistics of the Harvard Medical School show that the noncollegiate members of the school are but seven months younger than the collegiate, it would be wise to inquire—

"8. Whether a four years' course in liberal arts may not abundantly pay for seven months' delay in entering upon medical practice?

"It has been assumed that a three years' course in arts would attract far greater numbers of young men than can be induced to take a four years' course. Inasmuch, however, as many of the best colleges of the country have for many years offered both three years' and four years' courses, under the same teachers and with degrees conferred by the same authorities, the three years' course invariably offering even greater privileges of election than the four years' course, and still many times more students have always chosen the four years' course than the three years'—it is certainly fitting to start another inquiry, namely:

"9. Whether untested assumptions are to be made the basis of far-reaching and revolutionizing measures in educational administration?

"It has been assumed that Harvard College, without consulting with any other colleges of the country, has the full right to cut down the A. B. course to three years. Might it not be well to discuss for a little—

"10. Whether she has not an equal right, if it please her, to cut it down to two years, or to one, or to six months?

"It has been assumed that if Harvard were to cut down her course, all the other classical colleges would do the same. In view hereof, might it not be well to ask—

"11. Whether, in case they were to do so, it would be a good thing for American education—a thing for which, in history, Harvard University would be pleased to take the responsibility? And

"12. Whether, in case they were not to do so, it would be a good thing for Harvard College?

"In closing, I may be permitted to say that Harvard College is the one institution whose leadership the other colleges of the country will gladly accept and follow so long as she is true to her own illustrious traditions. If just now these other institutions break with her and revolt, it is because they can not recognize her in her strange new rôle. She is not herself. Her face is set the wrong way. She is marching, not at the front forward, but at the rear backward. The warmth of our remonstrance is simply an index of our habitual love and loyalty."

This letter was written a few days before the meeting of the Harvard board of overseers, at which meeting it was supposed that the question of shortening the course would be decided, and it was undoubtedly intended to influence this decision.

PRESIDENT ANDREWS, OF BROWN UNIVERSITY.

The fifth annual meeting of the New England Association of Colleges and Preparatory Schools was held at Boston, Mass., October 17 and 18, 1890. At this meeting President Andrews, of Brown University, delivered an address on "Shall the college course of study for the bachelorship in arts be reduced?" As a representative of one of the smaller institutions, it was to be expected that he would uphold the negative side of the question, which he did in a very able manner. His address was discussed freely and brought forth the fact that the men at the head of some of the leading institutions for secondary instruction are greatly dissatisfied with the present state of our educational system. While

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they did not definitely declare for the reduction of the course of study, they were emphatic in the expression of the opinion that something ought to be done to make our system more elastic, "so that those who feel the need of starting in their life work as soon as possible, and are ready to put forth extra effort, would be encouraged to finish their course in three years rather than four."

During the discussion Mr. George L. Fox, rector of the Hopkins Grammar School, New Haven, Conn., said: "I am aware that this [completion of the course in three years] is often done at Harvard, but so far as I know, at other colleges, while in rare instances it may be done, there is not the disposition to encourage any such efforts. If such a possibility could be distinctly held out to men having a college course under consideration, some worthy men would be deterred from the unwise step of entering the professional school without college training, as they do now."

Another objection to the proposed change was advanced by Prof. Tracy Peck, of Yale. In the course of his remarks, on the negative side of the question, he said: "If there is a widespread call in the thoughtful part of the community for reducing the college course of liberal study to three years, I have not been able to discover it. There certainly are many earnest young persons whom poverty or other circumstances prevents from pursuing a full or even any course of liberal study. Such cases appeal strongly to our sympathies, and most colleges provide for the support of the meritorious; but no reduction in the conditions of time or other requirements can reach them all, and it would be unjust to the majority of students if their privileges were to be diminished because of the unfortunate few."

Exception may well be taken to that part of Prof. Peck's remarks which relate to the curtailment of the privileges of the majority of the students. Let us consider whether in fact these privileges would be diminished by the shortening of the present college curriculum. It appears not, for the reason that the graduate department would still be at the command of such students as might wish to pursue still further those studies which comprise what is known as a liberal education, and their privileges would be at least as great as they are at the present time. The shortening of the undergraduate course would not by any means carry with it the abridgment of any of the opportunities or facilities for advanced study now offered by our institutions of learning, but would very probably be the means of inducing a larger number of young men to pursue such studies, since they would be enabled to enter thereon one year earlier than at the present time.

Another objection to the proposed reduction is that it would mean the degradation of the A. B. degree. If this degree had a fixed meaning, or meant in one part of this country the same that it means in another part, this might perhaps stand as an objection; but we are sorry to say that such is not the case, and will not be so long as State legislatures continue to grant to institutions the power of conferring degrees without defining the requirements to be demanded therefor. Should this reduction be made by Harvard and other leading institutions, it is certain that even then the A. B. degree conferred by these institutions would still mean at least as much, if not more, than the A. B. given by a large number of institutions in the United States.

The full discussion which the subject has excited has the great advantage that those upon whom the final adjustment of the matter will devolve will act in full view of all the difficulties to be met and of all possible means which experience suggests for the solution of the problem.

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CHAPTER VII.

GRADUATE DEPARTMENTS OF UNIVERSITIES.

Organization—Development of graduate departments in four institutions: Yale; Harvard; Princeton; Columbia—Nonresident courses—Growth of graduate work in eighteen years—Number of students in graduate departments from 1871–72 to 1889–90, inclusive—Statistics of graduates in individual institutions—Effect of the opening of Johns Hopkins University on other institutions—Drawing power of three typical institutions, Harvard, Johns Hopkins, and the University of Michigan, as shown by the State residence of the graduate students—Probable causes of the popularity of Johns Hopkins University—States in which graduate students of Harvard, Johns Hopkins, and the University of Michigan received their first degrees.

ORGANIZATION.

The organization and maintenance of departments for the prosecution of graduate or advanced study and research is of comparatively recent date. By this we do not mean that before the establishment of such departments graduate students did not remain in residence at the universities, for we find that in some cases such students remained in residence before special provision had been made for their instruction. An attempt is here made to trace the progress made by a few institutions in this direction.

Yale College.—The catalogues of Yale College show that although graduate students were in residence as early as the year 1836–37, no mention was made of any provision for their instruction until the year 1844–45, when the catalogue for that year contained the following: "Instruction is also given by the professors to resident graduates, provided a sufficient number present themselves to form a class." A few years later the catalogue for 1847–48 announced the establishment of a new department, in the following terms:

"It has long been felt at Yale College to be important to furnish resident graduates and others with the opportunity of devoting themselves to special branches of study, either not provided for at present or not pursued as far as individual students may desire. With the hope of accomplishing this object more fully and systematically, the corporation at their meeting in August, 1846, appointed a committee to take this subject into consideration, and in accordance with the report of the committee, at their next meeting in August, 1847, established a new department called the department of philosophy and the arts. The branches intended to be embraced in this department are such in general as are not included under theology, law, and medicine; or more particularly mathematical science, physical science, and its application to the arts, metaphysics, philology, literature, and history. Instruc ion in this department may be given by professors not belonging to the other departments, by the academical professors, and by such others as the president and fellows may approve. The instructors for the year, with the president, compose the faculty of the department. The instructions in the department are intended for graduates of this and other colleges, and for such other young men as are desirous of pursuing special branches of study; but it is necessary for all students in philology and mathematical science that they be thoroughly grounded in those studies."

The greater portion of the students enrolled in this department were not graduates, but may perhaps properly be called *special* students, who wished to pursue studies not given in the regular academical department. A school of applied chemistry was made a part of the department from its organization. The catalogue for 1852–53 shows that a school of engineering had also been established, and that of the 55 students enrolled in the department during that year, 51 were connected either with the school of applied chemistry or the school of engineering. The same catalogue also contained the following respecting degrees: "The degree of bachelor of philosophy will be conferred by the president and fellows upon students in the department of philosophy and the arts, after being connected with the department for two years and passing a satisfactory examination in three branches of study."

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The catalogue of 1854–55 shows that the chairs of chemistry and engineering received the name of Yale Scientific School some time during the year 1854, and that several new professors became connected with it. The following extract from The History of Yale College shows the development of the department from this time:

"The 'scientific school' now entered upon a rapid career of extension. Mr. Joseph E. Sheffield began his remarkable series of gifts. The 'school,' in honor of its distinguished benefactor, was called in 1861 the 'Sheffield Scientific School,' and a large number of new professors were appointed. Thus the 'scientific school'—a section of the department of philosophy and the arts—had now become one of the most flourishing and valuable branches of the college. Its origin was due to the effort which had been made, in 1846, to establish what was then called a 'fourth department,' the primary object of which was to provide instruction for graduate students in all branches of knowledge. But till this time everything had been in a formative state. There had been all along a small body of graduates who went on with their studies in history, philology, and literature; there had been also graduates among the students in the scientific section of the 'department,' who pursued advanced studies under the instruction of the scientific professors; but it was found by experience that the larger proportion of those who applied for admission to the Sheffield school had not received the proper preliminary education which would enable them to pursue the study of any of the higher branches of science to advantage. Accordingly, in 1860, substantially what is the present organization of the school was decided upon; the courses of instruction being adapted to the educational wants of those persons who resorted to it, and to the somewhat general public demand for what was beginning to be known as the 'new education.' A scheme requiring three years of study was planned after the methods followed in the academical department, characterized mainly by the omission of classical studies and the prominence given to scientific studies."

This new arrangement of the scientific section was undoubtedly the cause of the readjustment of the whole department, which occurred in 1872. According to this reorganization the department of philosophy and the arts was made to include the undergraduate academical department, the Sheffield scientific school, the school of fine arts, and the school for graduate instruction. This organization is still in force. It will thus be seen that a distinct school for graduate instruction was not organized until 1872.

No degree for advanced work seems to have been given by Yale prior to 1860–61. In that year the catalogue contained the following:

"It is required of candidates for the degree of doctor of philosophy that they shall faithfully devote at least two years to a course of study selected from branches pursued in the department of philosophy and the arts. The selection may be made from the studies of either or both sections, but must belong to at least two distinct departments of learning.

"All persons who have not previously received a degree furnishing evidence of acquaintance with the Latin and Greek languages will be required, before presenting themselves for the final examination for the doctor's degree, to pass a satisfactory examination in these languages, or in other studies (not included in their advanced course) which shall be accepted as an equivalent by the faculty.

"The degree of doctor of philosophy will be conferred on all members of the department who, having complied with the conditions above stated, shall pass a satisfactory final examination, and present a thesis giving evidence of high attainment in the branches they have pursued."

The requirements in vogue at the present time require the student to have taken a bachelor's degree, to have a good knowledge of Latin, German, and French, and to have pursued for two years studies in the graduate department.

Harvard University.—The history of graduate instruction in Harvard is ably set forth by James Mills Peirce, secretary of the academic council, in his report to President Eliot for the year 1879–80. In this report he says:

"As no report has heretofore proceeded from this (the graduate) department, it seems to be desirable that I should take the occasion to present a brief sketch of its history. The residence of graduates at the university for the purpose of pursuing advanced studies is a practice probably as old as the college itself. Traces of it are to be found in the ancient records of the faculty, and it has always been felt that the presence of such persons, even when their connection with the university has been of the slightest kind, has had a tendency to heighten the serious scholarly feeling of the place. At the time of the foundation of the scientific school, under the administration of President Everett (1846-1849), one

of the main objects had in view was the provision of instruction suited to the wants of the most advanced students, and it will be remembered that, in the first organization of that school philological studies were represented in the faculty as well as the natural and practical sciences. In point of fact, the scientific school did, within the boundaries to which it was soon restricted, fulfill an important function in regard to higher work, and had a considerable influence in preparing the way for what is now the graduate department. Until the great extension of the elective system of the college ten years ago (1870), and the establishment of the degrees of Ph. D. and S. D. somewhat later (1872), it was the only department of the university that offered the opportunity of obtaining a degree by the performance of special work of a high character in pure science. It was resorted to by college graduates and other advanced students who desired to make a real beginning of a scientific career. Its opportunities of study, under professors of rare eminence, not overburdened with undergraduate work, and eager to promote genuine scientific achievement, were exceptionally fine, though inadequately represented in any printed record, and the degree of the school soon attained a very high estimation.

"The next step that was taken towards the provision of instruction for graduates was the institution of the system of 'university lectures' during the administration of President Felton [1860–1862]. Early in 1863, under the presidency of Dr. Hill, these courses of lectures, having been practically discontinued, were resumed on a plan of increased extent and efficiency; and at the same time it was ordered by the corporation that 'the president, with the professors in all departments of the university, be authorized to meet and associate themselves in one body for the consideration of its educational interests, and for the arrangement of such courses of lectures as may be thought expedient for the benefit of the members of the professional schools, graduates of this or other colleges, teachers of the public schools of the Commonwealth, and other persons.'"

The university lectures do not seem to have been very popular. In the seven years from their establishment in 1863, seventy-four courses of lectures were delivered, of which number sixty-seven were upon scientific subjects. The seven exceptional courses were delivered before 1866.

At the beginning of Dr. Eliot's administration graduate instruction was placed upon a permanent and more efficient footing. In 1869 two courses of instruction, one in philosophy and the other in modern literature, were opened to "graduates, teachers, and other competent persons (men and women)." Thirteen teachers took part in the two courses, 7 in the first, and 6 in the second. Twelve students were in attendance upon the courses, 4 of whom presented themselves for examination on the course in philosophy. In his report for 1871–72 President Eliot says: "The university lectures have now been tried for nine years. Although some temporary advantages and certain improvements have resulted from them, it must be confessed that they have distinctly failed as a scheme for giving advanced instruction in philosophy, history, and the humanities, and that they have failed hopelessly and in an unexpectedly short time. They have not induced bachelors of arts of this university to remain in Cambridge for purposes of systematic study, and they have not attracted to the university advanced students from other places. Advanced students want profound, continuous, and systematic teaching. The university lectures, taken together as a body of teaching, have been discursive, heterogeneous, and disconnected." The best results were obtained in 1869–70, when the courses in philosophy and modern languages were given. Nevertheless, even these two long courses, given by a succession of five or six different teachers, lacked consecutiveness and unity of plan and method.

In 1872 the corporation and board of overseers adopted a statute of which only a summarized statement can be given. "The scheme contemplates residence of one year for the masters' [A. M.] degree, of two years for the degree of doctor of philosophy, and of three years for the degree of doctor of science, examinations for all degrees, and the presentation of these by candidates for either doctorate." This action of the university immediately attracted an increased number of students, as will be seen by a glance at the table on page 819.

Princeton.—The catalogues of Princeton do not show the presence of graduate students at the institution prior to 1870–71, in which year there were 3 in attendance. In 1870 three fellowships were created, and the students referred to were the holders of them. The conditions on which the fellowships were bestowed were such as to require the holders thereof to pursue advanced studies for at least one year. The number of fellowships was gradually increased, thus increasing the number of graduate students; but it may be well to remark that until the year 1877–78 no graduate students, excepting fellows, were

in attendance at the college, although a few such students had been in attendance at the scientific school. In 1877 Dr. McCosh made a report to the board of trustees on the course of study in Princeton College. In this report he says:

"In the last few years there have been a few graduates receiving instruction from individual professors. The board of trustees has now sanctioned post-graduate courses. They have been started this year experimentally, and the trial has been successful beyond all expectation.

"The aim of every college should be to secure a fair amount of scholarship from every student. No college can make all its students great scholars. But there is a certain proportion, say one in ten, or one in five, who as having the taste and the talent may be made so. This is to be done by postgraduate courses. We have at present no fewer than 42 graduates, mostly from the College of New Jersey, but a number from other universities in America and Great Britain, attending classes in our college, chiefly in philosophy and physics."

From that time the graduate courses of Princeton have been well attended. In 1890-91 graduate courses will be offered in the following subjects: Theoretical ethics, science and religion, Pluto and his philosophy, modern philosophy, history, Latin, pedagogics, Greek, architecture, archæology, English language, Sanskrit, Semitic languages, physics, higher mathematics, theoretical astronomy, biology.

Columbia College.—The graduate department of Columbia College was not organized until 1880, although graduate students were enrolled as early as 1874-75. Here, as at Princeton, the first graduate students enrolled were induced to pursue advanced studies through the instrumentality of fellowships. The holders of these fellowships were not importuned to pursue studies in the college itself, but were encouraged to resort to foreign universities, and the only conditions imposed upon them was to report the character of their work periodically to the president. But on the organization of the graduate department a new departure in this respect was made, which was the adoption of a plan for the appointment of fellows with tutorial duties. This scheme was first put into operation at the close of the school year 1883-84, and marks a considerable increase in the number of students in the graduate department.

Nonresident courses.—In addition to the institutions that provide courses of study for resident graduates, there are a number of institutions that provide similar courses for nonresidents. Such courses were established as early as 1874, and are, as a rule, taken by large numbers of students. In such cases the students pursue their studies at home, and, after a satisfactory examination, the appropriate degree is conferred upon them. At least one institution, the Illinois Wesleyan University, also offers a nonresident course of study for undergraduates, which leads to the degree of Ph. B. These courses are intended for persons whose circumstances and occupations are such that they would be unable to obtain a higher education if residence at an institution were insisted upon. In some cases where a demand arose for an opportunity to do advanced work for which credit would be given, nonresident courses were established in preference to resident courses, because the time of the professors was so fully occupied with other duties that they could not give the time that would be demanded by resident graduates.

GROWTH OF GRADUATE WORK IN EIGHTEEN YEARS.

The growth of graduate work in American colleges and universities during the past twenty years has been remarkable, the number of students in graduate departments of such institutions having increased from 198 in 1871-72 to 1,998 in 1889-90. This increase has been due, probably, to the greatly increased facilities which have lately been provided for the prosecution of advanced study and research in the older foundations and to the establishment of new institutions in which advanced work is the chief if not the only feature. Of the latter class the number is very small, Johns Hopkins University, at Baltimore, Md., opened for instruction in 1876, and Clark University, at Worcester, Mass., opened in 1889, being the only representatives. The larger part of the students of the former are registered in the graduate department; the latter admits such persons only as have already received their first degree or have otherwise prepared themselves to enter upon advanced study.

The number of students in the graduate departments of colleges and universities in the United States from 1871 to 1890 was as follows:

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Year.	Students.	Year.	Students.	Year.	Students.
1871–72	198	1877–78	414	1884–85	869
1872–73	219	1878–79	465	1885–86	935
1873–74	283	1879–80	411	1886–87	1,237
1874–75	369	1880–81	460	1887–88	1,290
1875–76	399	1882–83	522	1888–89	1,343
1876–77	389	1883–84	778	1889–90	a1,998

a Includes 281 nonresident graduates.

As will be seen from the above, the increase in numbers has been fairly regular, especially during the last ten years.

Statistics of graduates in individual institutions.—In order to show the increase in individual institutions, and the fluctuations caused in some of them by the establishment of new institutions, the following table has been prepared. The statistics have, with few exceptions, been taken from the annual catalogues of the institutions concerned. In a few cases where catalogues were not available the statistics were taken from the annual reports of the Bureau:

Number of students in graduate departments.

Year.	Harvard.		Johns Hopkins University.	Yale University.	Princeton.	University of Michigan.	Columbia College.	Cornell University.	Boston University.	University of California.	University of Minnesota.	University of Kansas.	Lafayette College.	University of Pennsylvania.
	Graduate department.	Graduate students in undergraduate department.												
1870–71	8	------	------	24	3	6	------	------	------	------	------	------	2	------
1871–72	11	------	------	53	5	9	------	2	------	------	------	------	2	------
1872–73	20	------	------	50	7	8	------	5	------	------	------	------	2	4
1873–74	43	4	------	60	7	9	------	11	------	2	------	------	3	9
1874–75	53	5	------	55	0	------	5	16	7	9	------	------	4	2
1875–76	52	7	------	60	8	15	8	13	11	5	5	------	6	------
1876–77	58	9	------	67	8	14	3	23	11	3	2	------	10	2
1877–78	64	7	58	50	52	7	7	21	23	4	0	1	7	4
1878–79	49	2	63	46	68	11	9	15	37	5	3	3	5	1
1879–80	51	------	79	39	47	13	10	7	39	7	0	2	2	------
1880–81	41	2	102	29	45	10	7	14	45	6	1	1	3	------
1881–82	49	12	99	44	63	13	1	22	53	3	9	3	3	1
1882–83	55	20	125	41	67	25	7	36	73	2	9	6	5	1
1883–84	75	18	159	30	62	19	25	21	78	6	10	10	13	4
1884–85	70	21	174	37	66	15	23	33	101	5	17	21	14	6
1885–86	72	16	184	42	58	a35	23	35	102	9	25	14	25	4
1886–87	70	12	228	56	95	a41	25	41	100	9	22	14	25	5
1887–88	96	13	231	69	80	a59	20	52	107	12	21	13	37	45
1888–89	95	21	216	79	93	a65	35	69	114	17	34	13	38	26
1889–90	107	22	229	81	117	a78	70	84	100	21	48	17	40	37

a Includes nonresident graduate students.

Effect of the opening of Johns Hopkins University on other institutions.—From the foregoing table it would be inferred that the opening of Johns Hopkins University caused a temporary diminution in the number of graduate students in nearly all of the institutions presented. This should not, however, cause surprise to any one who is acquainted with the favorable conditions the new institution afforded for advanced study. At the time of its establishment few institutions in the United States could offer inducements in the form of fellowships. In this respect Johns Hopkins University had a decided advantage, as it possessed twenty fellowships available upon terms which naturally attracted the graduates of other institutions. The natural result in the course of time was that other universities secured funds for the same purpose.

The readiness with which the graduates from the graduate departments of the leading universities receive appointments to professorships in educational institutions has undoubtedly created a desire for advanced study among the young men. This fact, together with the multiplication of fellowships, has been an important if not the chief cause of the increase of students in graduate departments. The number of fellowships has increased from 19 in 1872 to 172 in 1889–90.[1]

[1] For value of fellowships, see Annual Report for 1888–89, pp. 649–654.

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State residence of graduate students at three typical institutions.—In connection with this subject of graduate students it may be interesting to know the sections of the country from which the different institutions recruit these advanced departments; for, the standing of a school is shown not only by the number of students that flock to it, but also by its drawing power or the geographical extent of its influence.

In order to give a fair representation of the drawing powers of three typical institutions, the annual catalogues of Johns Hopkins University, Harvard University, and the University of Michigan for the four years 1886-87 to 1889-90, inclusive, have been carefully examined with the view of ascertaining the home residences of the students in the graduate departments. In an investigation of this kind a fairer representation can be made by taking the statistics of a series of years than by taking the statistics of but one year. The result of the examination indicated is as follows:

Residence of students in attendance upon graduate departments of Johns Hopkins University, Harvard University, and the University of Michigan during the years 1886-87, 1887-88, 1888-89, and 1889-90.

States.	Johns Hopkins University.					Harvard University.					University of Michigan.				
	1886-87.	1887-88.	1888-89.	1889-90.	Total.	1886-87.	1887-88.	1888-89.	1889-90.	Total.	1886-87.	1887-88.	1888-89.	1889-90.	Total.
North Atlantic Division:															
Maine	3	4	9	6	22	....	1	1	2	4	....	....	....	1	1
New Hampshire	4	2	....	....	6	3	2	4	4	13	....	....	....	....	....
Vermont	2	2	1	2	7	....	....	....	....	....	....	....	....	....	....
Massachusetts	12	11	7	9	39	40	53	47	53	193	2	1	....	....	3
Rhode Island	1	1	1	1	4	....	....	3	2	5	....	....	....	....	....
Connecticut	5	4	2	3	14	....	1	1	1	3	....	....	1	1	2
New York	14	13	17	13	57	7	8	6	7	28	2	1	....	1	4
New Jersey	4	2	3	4	13	2	2	3	2	9	....	....	....	....	....
Pennsylvania	9	9	7	8	33	6	6	4	3	19	3	4	3	1	11
South Atlantic Division:															
Maryland	65	76	65	87	293	....	1	....	1	2	....	....	1	1	2
District of Columbia	3	1	6	5	15	....	....	....	2	2	....	....	....	3	3
Virginia	6	7	7	10	30	....	....	....	....	....	....	....	....	....	....
West Virginia	1	2	2	1	6	....	....	....	....	....	....	....	....	....	....
North Carolina	6	6	4	8	24	....	....	....	2	2	....	....	....	1	1
South Carolina	4	4	4	2	14	1	2	1	2	6	....	....	....	....	....
Georgia	7	6	5	3	21	....	1	....	....	1	....	....	....	....	....
Florida	....	1	....	....	1	....	1	....	....	1	....	1	1	....	2
South Central Division:															
Kentucky	3	3	4	4	14	....	1	....	1	2	....	....	1	....	1
Tennessee	2	1	1	2	6	....	....	....	1	1	....	....	....	....	....
Alabama	3	2	2	1	8	....	....	....	....	....	....	....	....	....	....
Louisiana	2	2	1	1	6	....	....	....	....	....	....	....	....	....	....
Texas	1	....	....	....	1	....	....	....	....	....	....	....	....	1	1
Arkansas	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
North Central Division:															
Ohio	13	7	9	9	38	4	6	8	8	26	1	....	2	2	5
Indiana	4	6	6	8	24	....	1	1	....	2	2	4	3	2	11
Illinois	6	8	10	3	27	3	4	2	1	10	....	5	7	8	20
Michigan	....	4	2	4	10	....	....	....	1	1	22	33	31	41	127
Wisconsin	4	3	7	3	17	....	....	....	3	3	2	1	1	1	5
Minnesota	4	3	2	1	10	....	....	1	1	2	3	....	1	2	6
Iowa	5	4	3	7	19	....	....	....	....	....	1	1	1	3	6
Missouri	3	3	2	4	12	....	....	1	1	2	....	2	4	2	8
North Dakota	....	....	1	1	2	....	....	....	....	....	....	....	....	....	....
South Dakota	....	....	....	1	1	....	....	....	....	....	....	1	1	....	2
Nebraska	4	....	1	1	6	....	....	....	....	....	....	....	1	....	1
Kansas	....	2	2	....	4	....	....	2	1	3	1	1	2	....	4
Western Division:															
Montana	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Colorado	....	....	1	....	1	....	....	....	....	....	....	1	1	2	4
Utah	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....
Washington	....	....	....	....	....	....	....	....	....	....	....	1	1	....	2
Oregon	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
California	7	3	1	....	11	1	3	2	2	8	1	....	....	1	2
North Atlantic Division	54	48	47	46	195	58	73	69	74	274	7	6	4	4	21
South Atlantic Division	92	103	93	116	404	1	5	1	7	14	....	1	2	5	8
South Central Division	11	8	8	8	35	....	1	....	2	3	....	1	1	1	3
North Central Division	43	40	45	42	170	7	11	15	16	49	32	48	54	61	195
Western Division	7	3	2	1	13	1	3	2	2	8	1	2	3	4	10
Foreign	16	18	18	13	65	2	3	8	6	20	1	1	1	3	6
U. S. Navy	4	3	1	2	10	....	....	....	....	....	....	....	....	....	....
U. S. Army	1	1	2	1	5	....	....	....	....	....	....	....	....	....	....
Total	228	a231	216	229	904	70	96	95	107	368	41	59	65	78	243

a The residence of seven students not given.

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This tabulation indicates that Johns Hopkins has a stronger drawing power than either Harvard or the University of Michigan. It is also noticeable that notwithstanding the fact that the North Atlantic Division has more institutions offering the advantages of well-equipped graduate departments than any of the other divisions, Johns Hopkins draws more students from this than from any other division excepting the South Atlantic in which it is situated. It is a well-known fact that institutions nearly always draw much the larger part of their students from the immediate locality in which they are situated.

Taking the figures as given above, we find that while Johns Hopkins draws 55 per cent of its students from sections other than the division in which it is located, Harvard draws but 25 per cent, and the University of Michigan but 20 per cent from such sections. It will be observed further that the number of foreign students in attendance at Johns Hopkins exceeds the number in attendance at the other two institutions.

Probable causes of the popularity of Johns Hopkins University.—The large number of students from the North Atlantic Division attending Johns Hopkins suggests that some department of this institution is superior to the corresponding departments of the institutions in that division. In order to arrive at some conclusion with respect to this matter the catalogues of Johns Hopkins have been examined with particular reference to the students from New York and Massachusetts, with the following result: The 57 students from New York were distributed among the studies as follows: Chemistry, 12; pathology, 7; history, 7; physics, 6; English, 5; biology, 4; astronomy, 4; mathematics, 3; Latin, 3; Romance languages, 3; geology, 1; histology, 1; and Semitic languages, 1. The thirty-nine from Massachusetts were divided as follows: History, 9; biology, 6; chemistry, 5; Greek, 5; geology, 4; Germanic languages, 3; mathematics, 2; philosophy, 2; Assyriology, 1; English, 1; and Sanskrit, 1. It will thus be seen that the two departments of history and chemistry include 33, or about one-third, of all the students from the two States specified, and may very properly be said to be the most popular departments of the institution. This statement is substantiated by the annual report of the president of Johns Hopkins, in which it is shown that more students are entered for those departments than for any other.

Probably, however, the true cause of the superior drawing power of this institution is to be found in the manner of making appointments to the fellowships. While a large number of the Harvard fellowships are open only to Harvard graduates, all of the Johns Hopkins fellowships are open to graduates of any institution. Thus, although the number of fellowships possessed by Harvard exceeds the number possessed by Johns Hopkins, the chances of obtaining a fellowship at Johns Hopkins by a graduate of another institution are larger than at Harvard.

It has been suggested that the place where a student received his first degree might have some influence in the selection of an institution for the prosecution of advanced study and research. In order to arrive at some conclusion with respect to this subject the catalogues for the past four years of the three institutions which have thus far been made the subjects of special study and investigation were again examined. Before giving the results of this investigation it may be well to state that of the 243 students registered in the graduate department of the University of Michigan during that time but 133 were resident students, the remainder pursuing advanced study at a distance. In this investigation the latter could not be included, as the catalogues do not give the desired information concerning these students. For the same reason 118 of the students at Johns Hopkins University who were attendants at single courses only could not be included.

While the investigation was being made it was found that the institutions represented were so numerous that it was deemed impracticable to give the names of the institutions. It was then decided to give merely the State residence of the students and the States in which they received their first degrees. So as to make the representation as simple and complete as possible the results have been incorporated in three separate tables, which are as follows:

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Table giving residence and State in which graduate students at Harvard University from 1886-87 to 1889-90 received their first degrees.

Residence.	Total number of students.	Number of students who received their first degrees in the several States.																								
		Maine.	New Hampshire.	Massachusetts.	Rhode Island.	Connecticut.	New York.	New Jersey.	Pennsylvania.	Virginia.	North Carolina.	South Carolina.	Georgia.	Kentucky.	Tennessee.	Ohio.	Indiana.	Illinois.	Michigan.	Wisconsin.	Missouri.	Kansas.	Colorado.	California.	Foreign countries.
North Atlantic Division:																										
Maine	4	2		1		1																				
New Hampshire	13		2	11																						
Massachusetts	193	2	1	168	2	1	6		2	1						5			1				1	3
Rhode Island	5				4				1																	
Connecticut	3					3																				
New York	28			17		1	9	1																		
New Jersey	9			7					1																	1
Pennsylvania	19		1	8		1			9																	
South Atlantic Division:																										
Maryland	2			2																						
District of Columbia	2			2																						
North Carolina	2			1							1															
South Carolina	6									1		3	2													
Georgia	1												1													
Florida	1			1																						
South Central Division:																										
Kentucky	2					1								1												
Tennessee	1														1											
North Central Division:																										
Ohio	26			10												14	2									
Indiana	2																2									
Illinois	10			4														5	1							
Michigan	1	1																								
Wisconsin	3			1																2						
Minnesota	2			2																						
Missouri	2																				2					
Kansas	3																					3				
Western Division:																										
California	8			1													2							5		
Foreign countries	20			1			1																			18
North Atlantic Division	274	4	4	212	6	7	15	1	13	1						5			1				1			4
South Atlantic Division	14			6						1	1	3	3													
South Central Division	3					1								1	1											
North Central Division	49	1		17												14	4	5	1	2	2	3				
Western Division	8			1													2							5		
Total	368	5	4	237	6	8	16	1	13	2	1	3	3	1	1	19	6	5	2	2	2	3	1	5	22	

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Table giving residence and State in which resident graduates at the University of Michigan from 1886-87 to 1889-90, received their first degrees.

Residence.	Total number of students.	Number of students who received their first degrees in the several States.																	
		Maine.	Massachusetts.	New York.	New Jersey.	Pennsylvania.	Texas.	Arkansas.	Ohio.	Indiana.	Illinois.	Michigan.	Minnesota.	Iowa.	Missouri.	Kansas.	Washington.	California.	Foreign countries.
North Atlantic Division:																			
Maine	1	1																	
Connecticut	2											2							
New York	1			1															
Pennsylvania	6					6													
South Central Division:																			
Texas	1						1												
Arkansas	1							1											
North Central Division:																			
Ohio	5			1					3			1							
Indiana	9									7		2							
Illinois	10		1								5	4							
Michigan	71			1	1				6	1	1	61							
Wisconsin	1								1										
Minnesota	2												1	1					
Iowa	5											2		3					
Missouri	3											1		1	1				
Nebraska	1			1															
Kansas	4											1				3			
Western Division:																			
Washington	2																2		
Oregon	1																	1	
California	1																	1	
Foreign countries	4								2										2
North Atlantic Division	10	1		1		6						2							
South Central Division	2						1	1											
North Central Division	111		1	3	1				10	8	6	72	1	5	1	3			
Western Division	6													2			2	2	
Total	133	1	1	4	1	6	1	1	12	8	6	74	1	7	1	3	2	2	2

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The facts here presented are so simple that an extended explanation of them appears entirely unnecessary. The tables show that a comparatively small proportion of the students concerned left their own geographical sections for their first degrees. We also find that the students who had received their first or bache or's degrees in the several geographical sections of the country were registered in the graduate departments of Johns Hopkins, Harvard, and the University of Michigan as follows:

Divisions.	Total number of students.	Johns Hopkins University.	Harvard University.	University of Michigan.
		Per cent.	*Per cent.*	*Per cent.*
North Atlantic Division	534	43.3	54.3	2.4
South Atlantic Division	277	96.8	3.2	0
South Central Division	47	76.6	19.1	4.8
North Central Division	319	52.7	12.2	35.1
Western Division	20	50.0	30.0	20.0

We thus find that Johns Hopkins University draws heavily from the institutions of all divisions. An examination of the tables will show that while but 21.8 per cent of the graduate students at Johns Hopkins received their first degrees in Maryland, 64.4 per cent of those at Harvard received theirs in Massachusetts and 55.6 per cent of those at the University of Michigan received theirs in Michigan.

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CHAPTER VIII.

UNIVERSITY AND SCHOOL EXTENSION.

Definition and description—Origin and history—Cambridge University—Oxford University—London Society for the Extension of University Teaching—University Extension in Scotland—In Ireland—In the United States—Chautauqua Literary and Scientific Circle—Johns Hopkins University and University Extension—University Extension in Pennsylvania—University and School Extension Movement in New York.

1. DEFINITION AND DESCRIPTION.

By the term university extension is meant that movement by which higher education is provided for all classes of people who are unable to attend the universities where such instruction is imparted. The definition given by Prof. R. G. Moulton, A. M., one of the Cambridge University extension lecturers, is "University education for the whole nation, organized upon itinerant lines." He says that university education has nothing to do with universities, that is, has no necessary connection with universities, and in order to support this statement he shows that one of the three great branches of the movement in England is not managed by a university, but by an association which simply goes to the universities for lecturers just as one would go to a grocery store to provide for the household. He claims that university education must be defined in antithesis to school education. School education is compulsory and administered under discipline, while university education is purely voluntary; school education is limited, while university education begins where school education ends, and is practically unlimited, as it may be kept up during a man's whole life. "The essence of university education," says Prof. Moulton, "is that it is education for adults; it is voluntary; it is unlimited in scope; unlimited in age; it applies to a man's whole life. If that be the true view of university education you will see that it has no necessary connection with universities, but it is equally the interest of all adults who have a desire to take part in it."

The methods adopted by the different branches for the extension of university education in Europe do not differ very materially. The elements employed are lectures, class, syllabus, weekly exercises, examinations, and certificates.

The lectures are open to everybody and the audience is expected to be as miscellaneous as the congregation of a church. But in every audience there is expected to be a nucleus of students. By this is meant persons who wish to learn more than is brought out in the lectures. For such persons the syllabus which contains the lecturer's own outline for the whole work of his course is provided. With the syllabus as a guide the student can employ the time between lectures very profitably in reading what is required. In addition to the outline of the course of lectures and references for reading, the syllabus contains a list of questions, one set of which is to be answered weekly. This is known as the weekly exercise, but is widely different from our examinations. The exercises are to be written at home, and any and all assistance that the student can derive from books, papers, or any source whatsoever is allowed. The exercises are not intended to find out how much the student remembers, but simply to train him to work for himself.

The class is held on the day of the next lecture either before or after the lecture. It usually occupies an hour, and during this time the students can ask any questions they desire. Very frequently the lecturer discusses points brought forth in some of the exercises, or repeats some bright saying made by a student. But it should be borne in mind that the exercises are treated as being confidential, and it is the lecturer's aim to see that the feelings of no student are hurt in the class.

At the close of the course of lectures a final examination is held. This is a written examination and is open to those only who have done the weekly exercises in a manner satisfactory to the lecturer.

The granting of certificates depends equally upon the lecturer's reports of the exercises throughout the term and the result of the final examination.

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2. ORIGIN AND HISTORY.

The term "university extension" seems to have become current in England as early as 1850, but the movement as it is now known was not started until more than twenty years thereafter. For a few years prior to the establishment of the university extension scheme, educational associations for mutual benefit had been formed in many of the towns in England, and university graduates had been engaged as lecturers. The associations thus established found the greatest difficulty in securing competent teachers, and therefore requested the University of Cambridge to supply them with lecturers and draw up a scheme of higher education suitable to the wants of the towns. "After careful consideration the university, in 1872, appointed a syndicate (or committee), and instructed them to inquire into the best methods of dealing with the subject, and afterward empowered them for a period of two years to try the experiment of holding courses of lectures and classes in a limited number of populous centers, and of testing the work by examinations. The result of the experiment proved satisfactory, and the syndicate were accordingly made permanent and invested with power to organize and superintend courses of lectures and classes in such populous centers as the syndicate might approve, where the necessary funds should be guaranteed from local sources."[1] The plan proved to be very successful, for we find that from 1873 to 1881 the Local Lectures Syndicate had conducted lectures in over sixty towns. In some of these places the scheme assumed a permanent form, either by association with some institution already established or by the erection of a college, while in others the syndicate was compelled to abandon the work, owing to a want of sufficient support.

The unit adopted by Cambridge University is a three months' course of lectures, one lecture being delivered each week. Arrangements can not be made for less than the unit unless it is to introduce or start a movement in a new place. When this is desired, a lecture upon some interesting subject is given, during the delivery of which the university extension movement is fully explained and its advantages freely set forth. Generally the people are so well pleased with the lectures that they wish them to be continued, and wherever a number of people sufficient to pay the expenses of a course of lectures evince such desire, centers are established. The university undertakes the educational organization of the course, while the towns must provide the funds and undertake the local management.

The university fee for a three months' course of lectures is £45, while the local expenses for hall, lighting, etc., are about £20. This sum must be raised by the local committee, but the manner of raising it varies widely at different centers. In a few cases sums of money have been obtained from concerts, etc., with which the centers were endowed, thus making them in a certain sense permanent.

Considerable care is taken in the formation of the local committees. These should be representative, and political or religious bias should be avoided. The committees should include teachers, artisans, ladies, and especially young people, who will be very useful to circulate information or sell tickets.

In 1887 Cambridge University, in order to maintain a high educational standard in its university extension movement, adopted what is known as the affiliation scheme. By this scheme students who attend a course of lectures prescribed by the university for a term of three years, and at the completion of which receive a certificate, may at any time thereafter proceed to the university and obtain its degrees with two years' residence instead of three, and are known as affiliated students of Cambridge University. The following-named towns have adopted the Cambridge University affiliation scheme, viz, Derby, Exeter, Hull, Newcastle, Plymouth, Scarborough, and Sunderland. The course for affiliated students is as follows:

1. Special series of courses.—This consists of six single courses, consecutive, thus extending over three years. They must be in the same group, but not necessarily on the same subject of the group.

2. General series of courses.—This consists of two single courses in a group other than that in which he takes the special series. It need not be consecutive, and may be taken before, during, or after the three years of special series.

3. Elementary examination on Latin and one other foreign language, Euclid, I–III, and algebra to quadratics.

Another important factor in the movement for the extension of the influence and teaching of the universities is what is known as the summer gathering. In-

[1] Calendar of Cambridge Local Lectures, 1880–81.

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vitations are extended to extension students to come to the universities for a certain length of time during the summer months and make use of the extensive laboratories, museums, and libraries. Cambridge limits its invitation to those more earnest students who have obtained certificates during the courses of lectures in the winter, and desire to supplement their theoretical knowledge by practical work. The Cambridge summer classes appeal to the few, and their purpose is to add to the educational efficiency of the work. During August, 1890, forty-one students attended the Cambridge summer classes. The mornings were devoted to practical classes in chemistry, physics, and geology (palæontology), while the afternoons were devoted to courses on Greek arts, architecture, early inscriptions, engraving, Egyptology, and single lectures on other subjects.

Some idea of what has been accomplished by Cambridge University can be formed from an investigation of the following summary:

Summary for the years 1873–74 to 1889–90.

Year.	Number of courses.	Average attendance at lectures.	Average attendance at class.	Average number of weekly papers.	Number examined.
1873–74	28–29	3,200	.....	.....	368
1874–75	a30–40	a3,500	.....	.....	a984
1875–76	a56	a7,273	.....	.....	1,724
1876–77	83	7,511	4,833	.....	1,075
1877–78	59	5,940	4,138	.....	1,088
1878–79	48	4,920	3,201	1,272	556
1879–80	47	5,009	3,748	1,293	694
1880–81	37	4,369	2,624	887	573
1881–82	43	3,406	2,100	822	502
1882–83	63	6,274	3,438	1,337	906
1883–84	66	7,878	4,783	1,649	1,175
1884–85	73	7,259	4,152	1,528	1,093
1885–86	80	8,557	4,380	1,893	1,378
1886–87	100	10,494	4,820	1,885	1,341
1887–88	96	9,509	4,653	1,975	1,531
1888–89	89	9,295	4,476	1,945	1,420
1889–90	125	11,595	5,405	2,458	1,732

a The figures are for but one term.

OXFORD UNIVERSITY EXTENSION LECTURES.

The extension movement was taken up by Oxford University in 1878. The plan of forming centers and the methods followed by Oxford are similar to those used by Cambridge. One of the most important points in which the two differ is in the number of lectures constituting a course. As has been said before, the least number for which Cambridge will make an engagement is for a single course of twelve lectures, while Oxford maintains courses of from six to twelve lectures, but certificates are not issued for attendance at courses of less than twelve lectures.

While the main point with Cambridge seems to be to maintain a high educational standard in the movement, it appears that Oxford does not lay much stress upon this point, but aims to extend the influence of the University as far as possible. This difference between these two branches is very apparent even at the summer gatherings. We have seen how chary Cambridge is with her invitations, but not so with Oxford, which welcomes all who care to come, irrespective of particular educational qualifications and whether university extension students or not. The courses of lectures are of general interest, and designed to meet the most varied tastes. The Oxford meeting touches the many and tends to extend more widely the influence of the university. The third meeting at Oxford, in August, 1890, was attended by 900 persons, just as many as attended the first meeting, in 1888.

The cost of the lectures ranges from £21 12*s.* for a course of six lectures to £54 12*s.* for a course of twelve lectures.

The number of towns in which local committees, acting in concert with Oxford University delegates, have been established is 132, and the number of students attending extension courses in 1888–89 was 14,351 and in 1889–90 the number was 17,904.

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LONDON SOCIETY FOR THE EXTENSION OF UNIVERSITY TEACHING.

The London Society for the Extension of University Teaching, which was the first body to follow the lead of Cambridge, dates its foundation from a public meeting held at the Mansion House, June 10, 1875, at which the following resolution was adopted:

"That the principle of the Cambridge University Extension Scheme be applied to London, and that the various educational institutions of the metropolis be requested to coöperate in an endeavor so to apply it."

The principal educational institutions acceded to this request, and are represented on the council of the society. Furthermore, the Universities of Oxford, Cambridge, and London appointed three members each to form a universities' joint board, to nominate lecturers and examiners, and undertake (in conjunction with the council) the general supervision of the teaching, and thus give that university status to the work which the absence of a teaching university in London rendered necessary. The existence of this board has further secured for the London society the advantage of a wide choice of lectures and a close connection with both the old universities.

The first courses were given at permanent institutions, but the size of the audiences soon proved this to be a poor plan. Special committees were appointed in the central and suburban districts, who arranged for courses of lectures in local halls, which led immediately to a great improvement not only in the size of the audiences, but also in the character of the work done. As the years passed by the difficulty of providing special courses of lectures for the most advanced students of the different centers presented itself. This was partly met in 1888 by the kindness of the Gresham committee in placing at the disposal of the society the Lecture Theatre at Gresham College, where central courses for students from the various local centres were established.

Another great difficulty seems to have been to obtain continuity in study. But this also has been remedied in a marked degree by the institution, recently, by the Universities' Board, of Sessional Certificates and Certificates of Continuous Study.

In order to show the progress of the work done by the London society and the favor with which it is meeting, the following tabular form is taken from the University Extension Journal of February 1, 1890:

Periods.	Number of courses.	Number of entries for the courses.	Average number of weekly papers.	Number of certificates awarded.
October-December, 1876	7	139	----------	----------
First year, 1877	18	601	----------	----------
Second year, 1878	19	704	----------	57
Third year, 1879	32	1,374	----------	91
Fourth year, 1880	44	2,237	----------	219
Fifth year, 1881	43	2,489	----------	199
Sixth year, 1882	65	3,214	610	288
Seventh year, 1883	50	3,421	625	292
Eighth year, 1884	53	3,602	625	330
Ninth year, 1885	63	5,195	803	405
Tenth year, 1886	61	5,064	806	482
Eleventh year, 1887	65	5,662	868	612
Twelfth year, 1888	80	7,150	1,204	859
Thirteenth year, 1889	100	10,962	1,882	1,361
Fourteenth year, 1890	130	12,923	1,972	1,350

IN SCOTLAND.

It is said that as early as the year 1874 the university extension movement was started in Scotland. Several Dundee citizens formed a guaranty fund, and arranged for five courses of lectures to be delivered by professors of the University of St. Andrews, three of the courses—chemistry, natural history, and physiology—being of twenty lectures each. This work was carried on for two years, but was rendered unnecessary by the establishment of University College, Dundee.

The movement was again started in 1888, and is now under the direction and supervision of the universities of Glasgow, Edinburgh, and St. Andrews. Although the work has been going on for but two years, the reports show that satisfactory progress has been made.

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IN IRELAND.

In Ireland the movement has been started recently by the Belfast University Extension Society. The first three courses of lectures arranged under the auspices of the society were very successful, as the following statistics will show:

Subject.	Average attendance.	Average number of weekly papers.
Geology	200	12
Shakespeare	134	19
Representative writers	182	17

Each course consisted of twelve lectures, and the number of certificates awarded was 30.

IN THE UNITED STATES.

The University Extension movement, as it is known in England, had no existence in the United States until 1887. The field of home study had, however, been occupied for some time by other educational agencies, which have, in a manner, paved the way for the adoption of the university extension movement. The foremost of these agencies is what is known as the Chautauqua movement.

CHAUTAUQUA LITERARY AND SCIENTIFIC CIRCLE.

This movement originated in the brain of Bishop J. H. Vincent, D. D., more than twenty years ago, and the first meeting was held in the summer of 1874 at Lake Chautauqua, New York, and was known as the Chautauqua Summer Assembly. The purpose was first to bring together Sunday-school teachers for conference and for a course of systematic instruction in biblical knowledge; and, second, to eventually include all learning, secular as well as sacred.

The plans were matured by Dr. Vincent during a return trip from Europe, and are stated as follows:

"It was to involve a course of reading and study covering the principal subjects of the college curriculum, but omitting of necessity its drill in languages and mathematics, giving to the English reader an outlook over the field of learning and some acquaintance with the masterpieces of literature, ancient and modern, employing handbooks and compendiums for the mastery of outlines and appointing more extensive work to be read—a course which the individual could pursue alone, if necessary, yet adapted for associated study. It was sufficiently simple to invite masses and to lead them on without discouragement from its difficulties or its extent, yet so thorough as not to be deemed superficial by the more learned. Above all, it was to bring the six secular days of the week into harmony of purpose with the Sabbath, not only by recognizing the Bible as a department of its study, but more especially by having the entire course penetrated with the spirit of reverence and faith."

The following statement of the methods of the Chautauqua Reading Circle was given by Mr. George E. Vincent, of the Chautauqua Assembly, October 10, 1889:

"The Chautauqua Literary and Scientific Circle was organized at Chautauqua, N. Y., in 1878. The central idea was to provide systematic and definite aid to earnest people who desire to pursue progressive courses of study. Large numbers were at once enrolled, and the membership has steadily increased. Nearly 150,000 people have been at different times members of the circle, and at any given time 50,000 are pursuing the course faithfully. It was the belief of the originators that thousands of people were ambitious to do systematic work, and needed only specific directions. The plan comprises a carefully selected course extending over four years, divided as follows:

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The four-years' course of the Chautauqua Literary and Scientific Circle.

1889-90.	1890-91.	1891-92.	1892-93.
Roman history.	English history.	American history.	Greek history.
Latin literature.	English literature.	American literature.	Greek literature.
Human nature.	English composition.	History and literature of the far East.	Greek mythology.
Political economy.	Astronomy.	Physiology and hygiene.	Ancient Greek life.
Art.	Geology.	Questions of public interest.	Circle of the sciences.
Philosophy.	Pedagogy.	German literature.	Zoölogy.
Physics.	Readings from French literature.	Religious literature.	Chemistry.
Physical geography.	Social questions.		Philanthropy.
Uses of mathematics.	Religious literature.		Religious literature.
Religious literature.			

A half dozen volumes approved by a council of six prominent men; a monthly magazine with supplemental readings, outlines of study, annotations, and other sources of aid; memoranda papers to be filled out either from memory or by reference to authorities, not examinations, but as means of fixing facts in their proper relation, and as thorough reviews of the subjects taught. At the close of the course those who have, upon their honor, done all the required reading, and filled out the memoranda papers, are given certificates, not college degrees.

"The promoters of the Chautauqua Reading Circle have invariably held up the college as the highest standard, as unquestionably offering the best opportunities for education. But at the same time they maintained that those who can not attend college ought to be given every encouragement to educate themselves. The eagerness with which people have availed themselves of the definite and intelligent plans offered by the Chautauqua organization is positive proof that there is a widespread ambition among the people at large to do systematic intellectual work. It is a source of gratification to the original circle of the United States that a home reading club should have been organized in England avowedly modeled on the Chautauqua system.

"As an outgrowth of the original plan, which provided only for individual study, readers in towns and cities have been drawn by a community of interest into organizations known as local circles. These clubs have proved of great value, not only in aiding members in their individual work, but in arousing an interest in intellectual things and in fostering a taste for better literature."

The following statistics were furnished by Miss Kate F. Kimball, the office secretary of the Chautauqua Literary and Scientific Circle;

Class of—	Number enrolled.	Number graduated.	Class of—	Number enrolled.	Number graduated.
1882	8,000	1,700	1888	20,000	4,000
1883	9,000	1,300	1889	23,000	3,850
1884	7,000	1,470	1890	25,000	3,700
1885	6,000	1,300	1891	24,000	----
1886	14,000	4,000	1892	16,000	----
1887	18,000	4,500	1893	13,500	----

Johns Hopkins University and university extension.—Dr. Herbert B. Adams, of Johns Hopkins University, in an article entitled University Extension in America, says "the first conscious attempts to introduce English university extension methods into this country were made in 1887 by individuals connected with the Johns Hopkins University." In 1887-88 Dr. Edward W. Bemis, a graduate of Johns Hopkins, gave a course of twelve lectures in one of the class rooms of the Buffalo (N. Y.) Library upon Economic Questions of the Day. The average attendance at these lectures was 250, of which number more than 200 usually staid to hear the class discussion.

In 1888-89 Mr. Edward C. Lunt, a graduate of Harvard University, gave a course of lectures at the Buffalo Library upon American Political History. The same year Dr. Bemis repeated his course on Economic Questions of the Day in Canton, Ohio, where he lectured two evenings in the week for a period of five weeks.

The work in Baltimore, Md., is described by Dr. Adams as follows: "The first practical beginning was made with a class of young people, who met once in two weeks, throughout the winter of 1887-88, in the reading room of a beautiful modern church close by the Woman's College. After an introductory talk upon

university extension by a Hopkins instructor the class was intrusted to a graduate student, Mr. Charles M. Andrews, now professor of history in Bryn Mawr College, who gave a series of instructive lectures, accompanied by class exercises, upon the History of the Nineteenth Century, with Mackenzie for a textbook on that subject. * * *

"Following the young people's course, the like of which is entirely practicable in any church society with a college man for class leader, came a coöperative and peripatetic course of twelve lectures for workingmen on The Progress of Labor by twelve different men from the historical department of the Johns Hopkins University. These twelve apostles of extension methods swung around a circuit of three different industrial neighborhoods in Baltimore, each man repeating his own lecture to three different audiences. * * *

"Every lecture was accompanied by a printed syllabus in the hands of the audience, and was followed by an oral examination and a class discussion. Every man lectured without other notes than those contained in his outline of topics. The courses were organized upon a business basis and not upon the theory of giving something for nothing. This coöperative experiment in university extension work was, however, only moderately successful. Probably it was more useful to the lecturers than to their hearers. It is the conviction of the writer that it is mistaken zeal for university men to attempt to lecture to workingmen, as such, or indeed to any class of people. University extension should be for citizens without regard to their occupation.

"The most successful educational experiments by Johns Hopkins men have been in connection with teachers' associations and Young Men's Christian Associations in Baltimore and Washington. Under such auspices coöperative and class courses in American history and economic and social science, with printed syllabuses, have been given before audiences varying from 150 to 1,000 appreciative hearers. Chautauqua circles in Baltimore have also been found intelligent and responsive to student lectures. Under the direction of Hopkins men a three-year's graduate course of study in English history has been successfully carried on by more than 1,000 students, who had already finished the four years of required study in the Chautauqua literary and scientific circles. A very elaborate syllabus based on Green's History of England and select volumes of the Epoch Series, has been the means of guiding this interesting work now in progress in all parts of the country. In connection with the Chautauqua College of Liberal Arts more detailed courses in ancient and modern history have been conducted in the same way, with monthly written examinations, the papers being in most cases set and read by Hopkins graduates, working under direction after the manner of Prof. W. R. Harper, of Yale University, president-elect of the new university at Chicago, who is the recognized leader in the recent higher educational work of Chautauqua."

University extension in Pennsylvania.—The following note, in reference to the starting of university extension in Pennsylvania, was furnished by George F. James, A. M., general secretary of the American Society for the Extension of University Teaching:

"There has been recently an interesting development in education in Pennsylvania. Many of the leading educators of the State have become interested in the English plan of popular education known as university extension, and in February of this year a meeting was called by Provost William Pepper, of the University of Pennsylvania, for a discussion and explanation of the system. The scheme, as it was presented, met with universal favor. On further consultation with men connected with the higher educational institutions of the State it was decided to form a society for the purpose of introducing and establishing university extension in this country. On June 1 [1890] the Philadelphia Society for the Extension of University Teaching was organized in that city with Provost William Pepper as president. A fund has been raised by subscription for the initial expenses of the society, and the secretary will be sent during the coming summer [1890] to England, where other influential members of the society will unite in a careful examination of the origin and development of university extension, and a study of the best forms of general and local organization. An earnest effort will be made by the society to adapt this system to American conditions. It seems clear to those interested in the movement that it promises valuable results to American education along many lines.

University and school extension.—The following extracts from the circular of the university and school extension for the year 1889-90 will give a fair idea of the purposes of this movement:

"The design of the university and school extension" is, in the words of the circular announcing its purposes, "to supplement and to strengthen the univer

sity and the school system, to increase the culture and to promote the interests of teachers as members of a profession, and in general to advance the knowledge of letters and of the arts and sciences.

"The work is not, however, restricted to teachers; it is open to all persons of the required age. No one can expect, through the university and school extension, to secure a university education; but university graduates and others, ladies and gentlemen, will thus have an opportunity of continuing or of taking up each year some one or two studies under university guidance and recognition.

"The courses in university extension will be parallel to those of the universities and, within the necessary limitations, of the high grade maintained in the best universities. The work in school extension, which will be slower in development, will be in the subjects taught in schools. It will also include the methods and the principles involved in teaching the respective subjects."

METHODS.

"The features of the work are home study, class work, lectures, instruction by correspondence, lectures by correspondence, the library, public examinations, prizes, and certificates—various marks of honor for work of high grade, but no degrees."

"Each registered member is entitled to one of the following syllabi, and may procure the others from the general secretary." [There are twenty-five of these syllabi, laying out courses of study, preliminary and advanced, in literature, history, psychology, political science, French, German, mathematics, astronomy, physical geography, geology, physics, chemistry, and philosophy of education. These are prepared by professors of Harvard, Yale, Columbia, Princeton, and by Superintendent Calkins.]

CLASSES.

"Any person may form a society or a class to study any one of the prescribed courses. A class should consist of from three to twelve students. The best talent available should be secured to lead or to assist in the work. The general secretary will assist in forming classes in New York, in Brooklyn, and in other places. A class can pay its registration fee and class instruction by charging its members a small fee.

"The class meetings may not only be made the occasion for pleasant social and intellectual intercourse, but the exercise may be varied by readings, essays, and discussions. It is suggested that small circulating libraries for the use of a class may be formed by the gift or loan of one or more books by each member of the class.

"A student who has no associates with whom to form a class should pursue his studies with the assistance of the correspondence courses. Registered members will, however, be advised as to the formation of classes."

CORRESPONDENCE.

"Registered members desiring to join correspondence classes should communicate with the general secretary. These classes will be formed only when a sufficient number of students express a desire for them. The correspondence will be under the personal direction of a university professor. Most of the professors in the university extension have consented to teach the correspondence classes in their respective studies.

"Correspondence classes are suggested for each of the following topics: Greek, Latin, French, German (the language and literature of these languages for a four or five years' course), English literature, psychology, political science, American and European history, physical geography, geology, chemistry, physics, astronomy, algebra (a two years' course), geometry, trigonometry, physical training, the philosophy and history of education."

LECTURES.

"The class and the lecture systems, as the work is developed, will be thoroughly well organized. During the year 1889-90 there may be a few lectures in New York or Brooklyn. It is expected that members of the university and school extension will have the opportunity of attending, each year, short courses of lectures by university professors."

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LIBRARY.

"In most of the syllabi the professors have outlined their subjects by topics; and after each topic they have referred in many cases, by chapter and page, to the best reading on the respective topics. The student has the benefit of readings selected in each subject by an acknowledged expert."

FEES.

"The registration, or membership fee for the present year, is $1 for one student or a small class, and $5 for a large class or a society.

"Ladies 18 years of age or older and gentlemen of 20 years or older, and also classes and societies, may become registered members.

"The fee for instruction by correspondence will be $10 for each study, but no correspondence class will be formed nor will the money be received until a sufficient number have expressed a desire to join the respective classes.

"All the lines of work, including the examinations, are entirely optional with members, nor will any charge be made for any part of the work unless that part is chosen by the member."

"The class registration fee of $5 entitles a class to 12 syllabi. Additional syllabi may be had by members at 25 cents each, or 6 for $1.

"Send registration fee with address to the undersigned."

SETH T. STEWART,
General Secretary,
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CHAPTER IX.[1]

COMPARATIVE DIAGRAMS ILLUSTRATING THE STATISTICS OF PROFESSIONAL EDUCATION DURING THE DECADE 1880-90.

Before entering upon an exhibit of the statistics of professional training in the United States for 1889-90, with particular reference to the statistics of the nine preceding years and incidentally to those of France and Germany for the same period, the attention of the reader may with great propriety be called to certain facts too important to be lost sight of.

Both in Germany and France education, higher and lower, since the beginning of the century has been in the hands of the State, and, as a result, the Government of France and of the several German States may each demand statistical information and compel its stipendiary to furnish it. On the other hand the information annually obtained by this Bureau is due to the courtesy of its correspondents who are under no other obligation to furnish their statistics to the Federal Government, or in many cases even to the government of the State in which they are located. From this it naturally follows that several delinquent correspondents will be found each year, though not infrequently as many as four blanks are sent out to such on as many occasions. When these delinquencies happen it is the custom to use the statistics furnished by the delinquent institution the preceding year, indicating the fact by a footnote. When an institution fails to report for two successive years it is taken out of the table unless there is evidence that it still exists. In the following diagrams it has been the object of the compiler to fill up such lacunæ whenever it appears that the institution still exists or has, after a period, been restored to the table.

A still more formidable difficulty, however, is presented by the dissimilarity of institutions which bear the name of college or university or normal school and the like, but beyond cautioning the reader in the matter it is advisable to leave the subject to a future occasion, though whatever can at present be attempted in this line is given in Chapter X, which deals with the curricula of the schools whose attendance is given in this.

[1] Prepared by Mr. Wellford Addis, of the Bureau, specialist in professional education.

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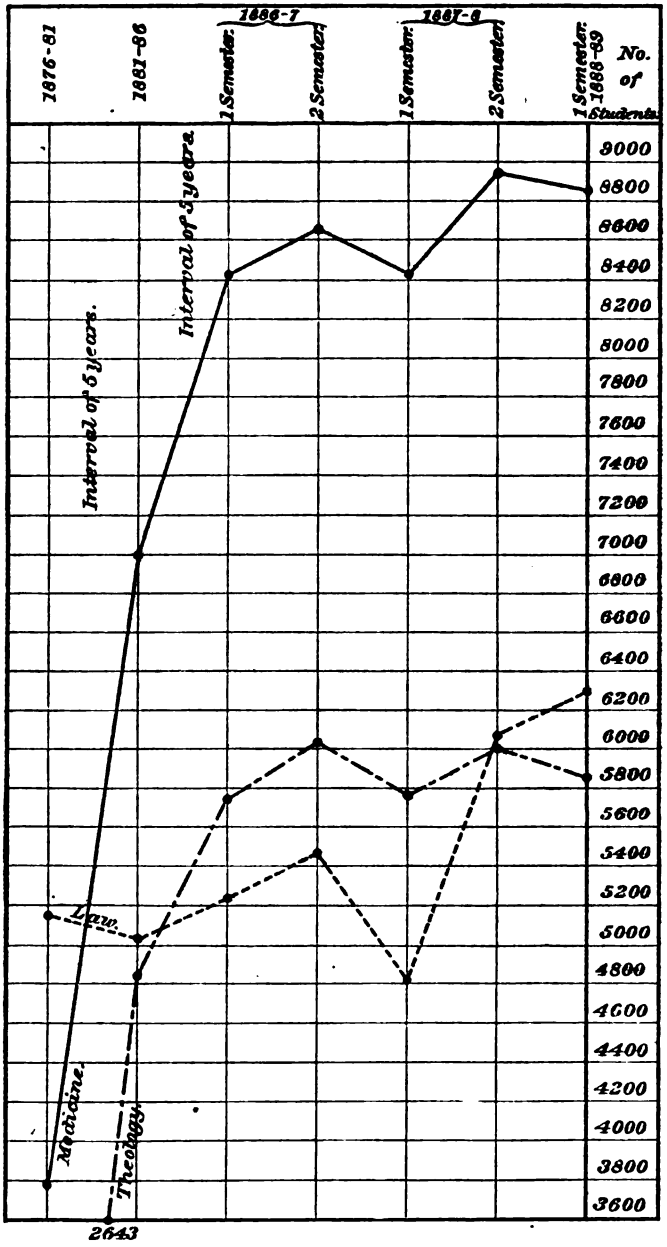
DIAGRAM 1.—*Showing movement of the enrollment in the faculties of law, medicine, and theology, in twenty-two German universities during thirteen years.*



——————— Medicine, 8886 students in 1889.
- - - - - - - - - - Law, 6304 students in 1889.
—·—·—·—·—·— Theology, 5849 students in 1889.

For every 100,000 inhabitants in Germany	Law.	Students in Medicine.	Theology.
There were in 1881	11	8	6
" " " 1889	13	18	12

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Location of German Universities.
Population, 49,421,064; area, 208,695 square miles.

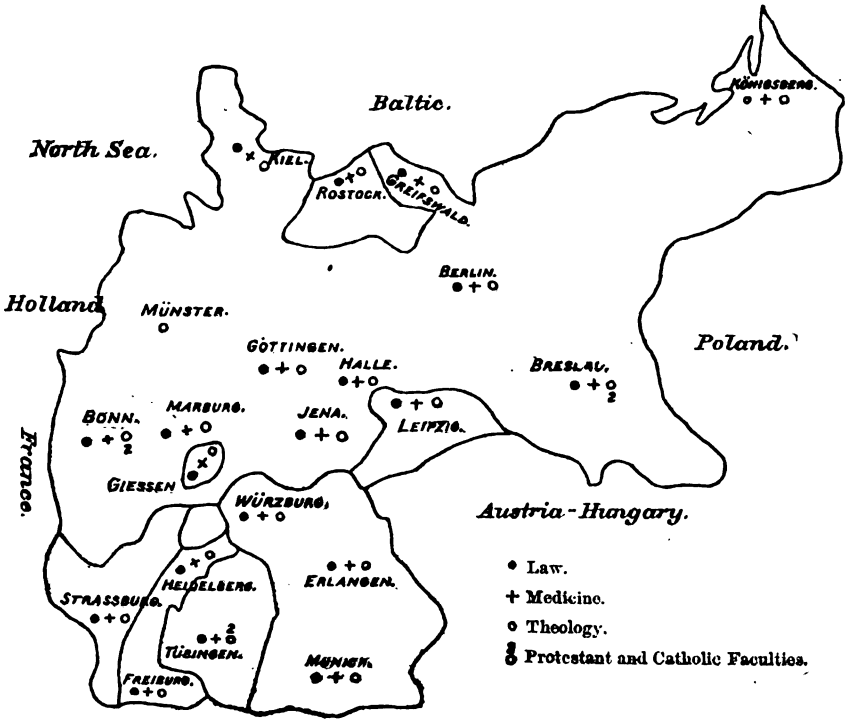

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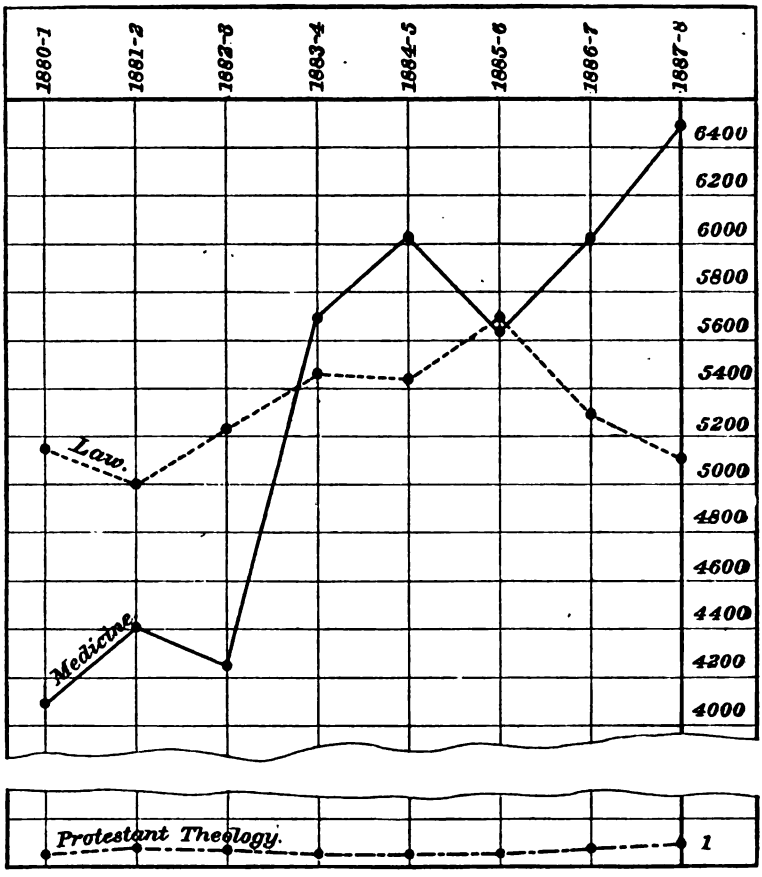
DIAGRAM 2.—*Showing movement of the enrolment in the State Faculties of Law, Medicine, and Theology in France during eight years.*

[Scale same as diagram 1.]



——————— Medicine, 6455 students, including candidates for the *officiat santé* in 1888.
- - - - - - - - - - - - Law, 5152 students, including candidates for the *certificat de capacité* in 1888.
—·—·—·—·—·— Protestant Theology, 101 students in 1888.

For every 100,000 inhabitants in France	Students in Law.	Students in Medicine.
There were in 1881	14	11
" " " 1888	14	17

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Location of faculties (schools) of higher education in France.

[Population, 37,930,759; area, 204,092 square miles.]

[Dotted lines indicate the "academies" into which the "University" of France is divided, not including Algeria and Corsica.]

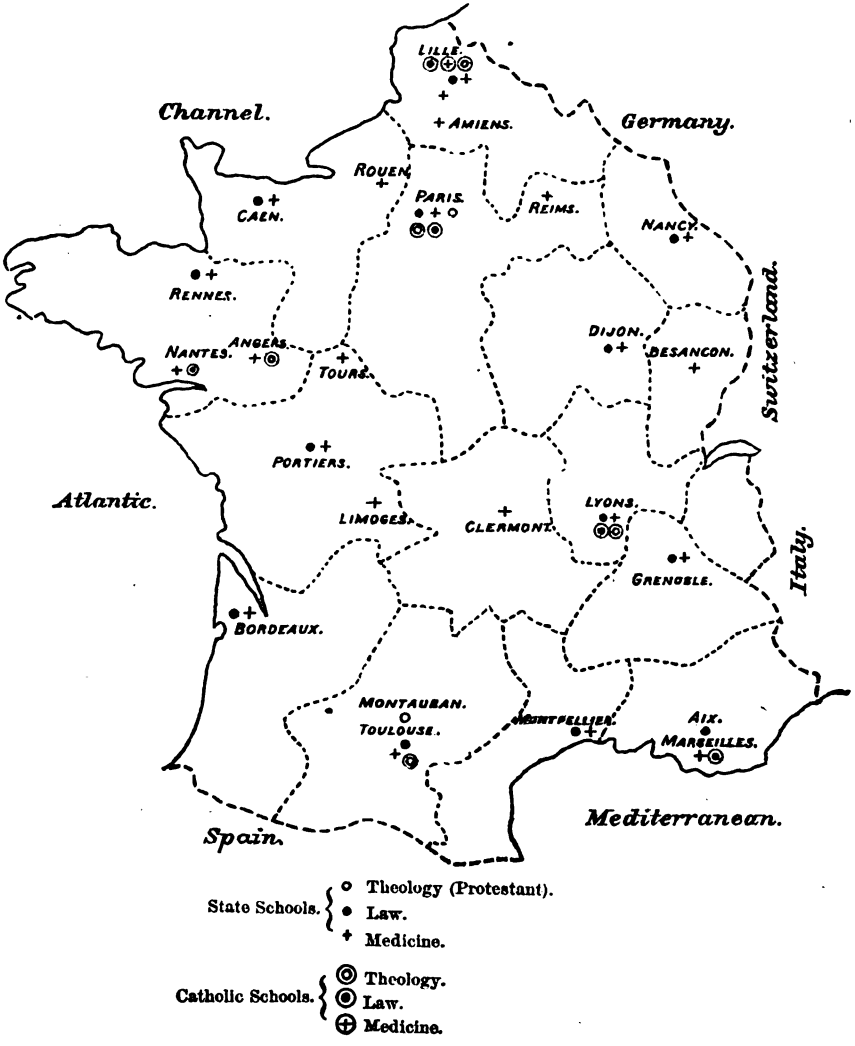

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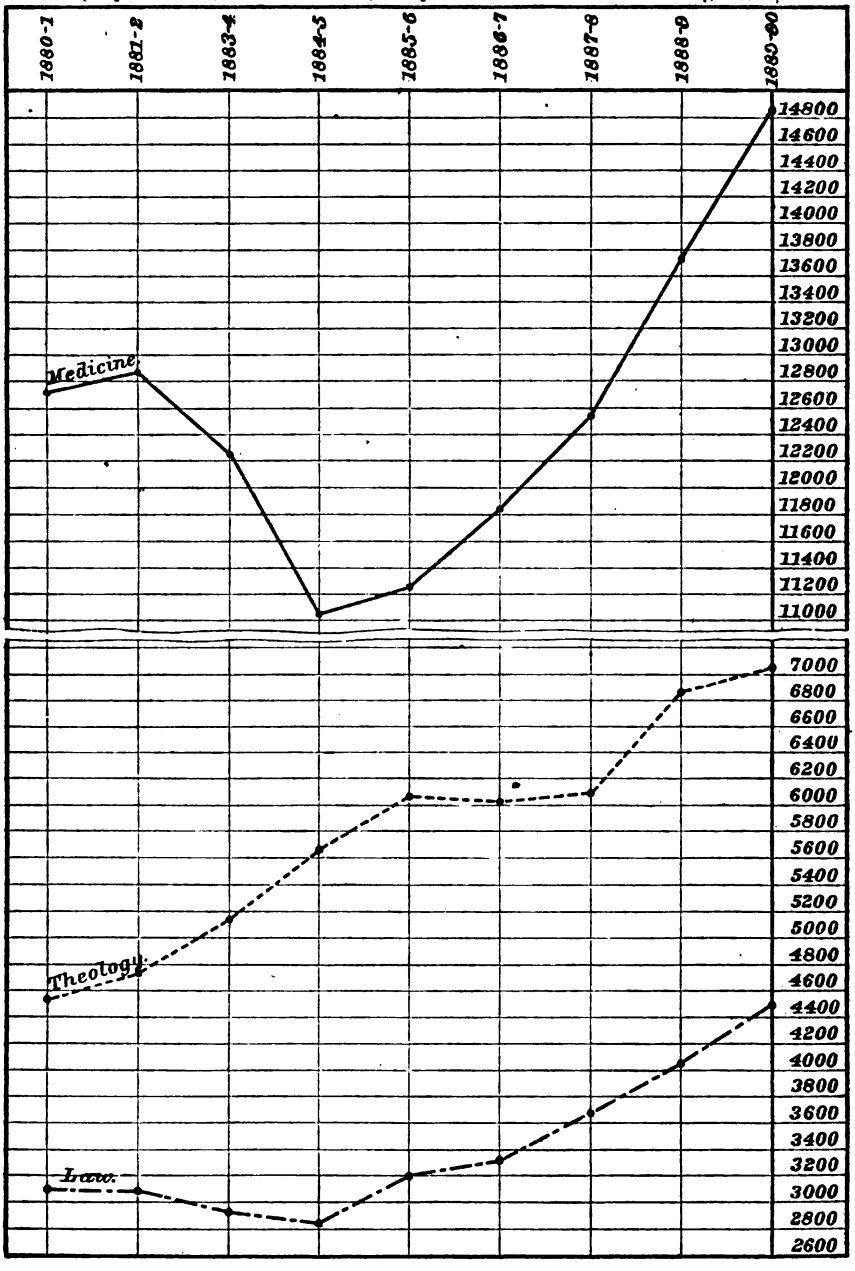
DIAGRAM 3.—*Showing movement of enrollment in schools of law, medicine, and theology in the United States during the period 1880-90.*

[Population 62,622,250; area 3,625,600 square miles. Scale same as Diagram 1.]



——————— Medicine, 14,884 in 1890

– – – – – – – – – Theology, 7013 in 1890.

—·—·—·—·—·— Law, 4518 in 1890.

For every 100,000 inhabitants in the United States	Law.	Students in Medicine.	Theology.
There were in 1881	6	25	9
" " " 1890	7	24	11

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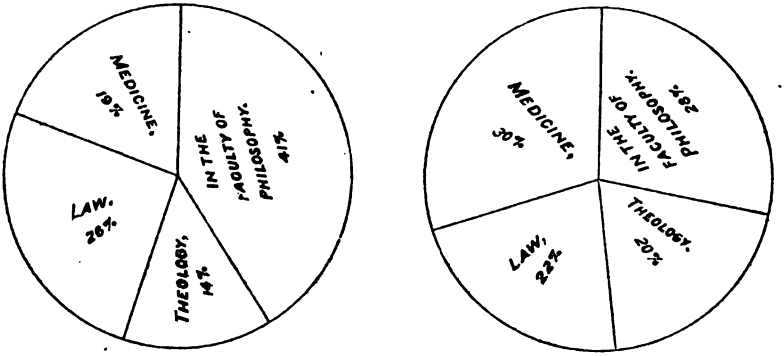
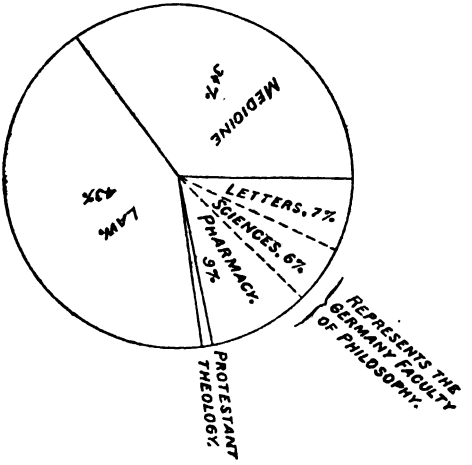
DIAGRAM 4.—*Showing the distribution of the enrollment in the German universities among the four faculties of which twenty are composed, the two faculties composing the University of Münster, and the Catholic Seminary of Braunsberg, at the dates of 1881 and 1889.*

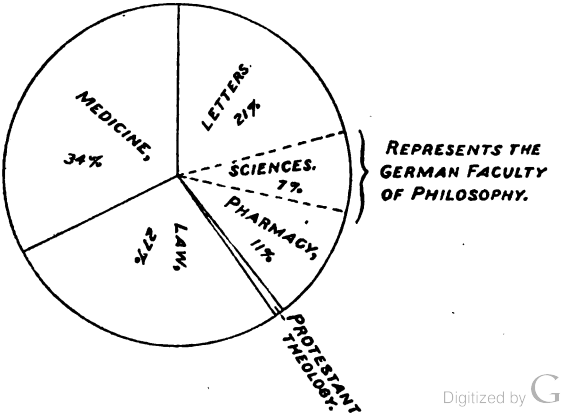


1876-81, 19,568 enrolled. 1889, first half, 29,294 enrolled.

DIAGRAM 5.—*Showing the distribution of the enrollment in the faculties of France at the dates of 1881 and 1888.*



1880-81, 11,973 enrolled.



1887-88, 19,152 enrolled.

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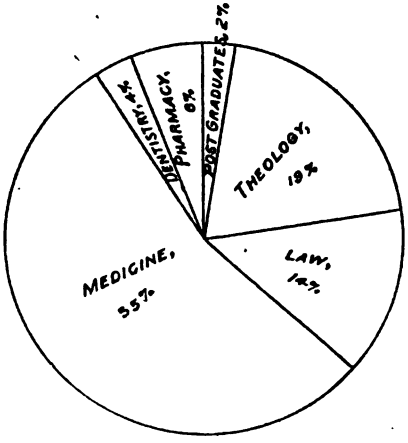
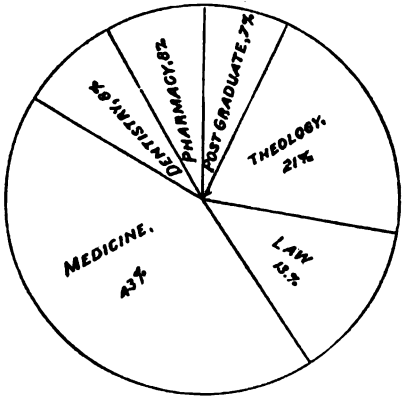
DIAGRAM 6.—*Showing the distribution of the enrollment of the several schools, colleges, and universities of the United States which have professional courses, at the dates of 1881 and 1890.*

[It will be remembered that the students of the faculties of France and Germany are baccalaureates, which is not necessarily the case with the students of professional schools or departments in the United States. See diagram 15.]



1880-81, 23,217 enrolled.



1889-90, 34,272 enrolled.

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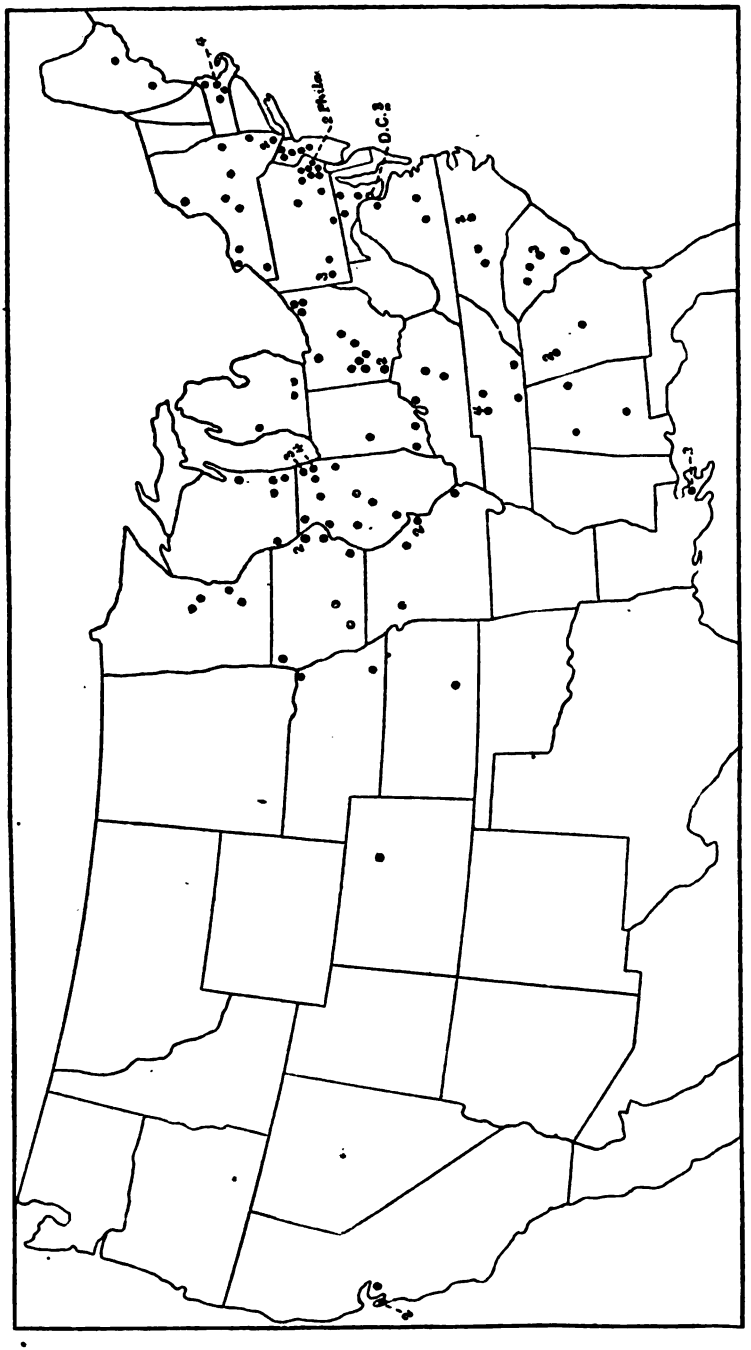

Location of schools of theology in the United States at the date of 1890.

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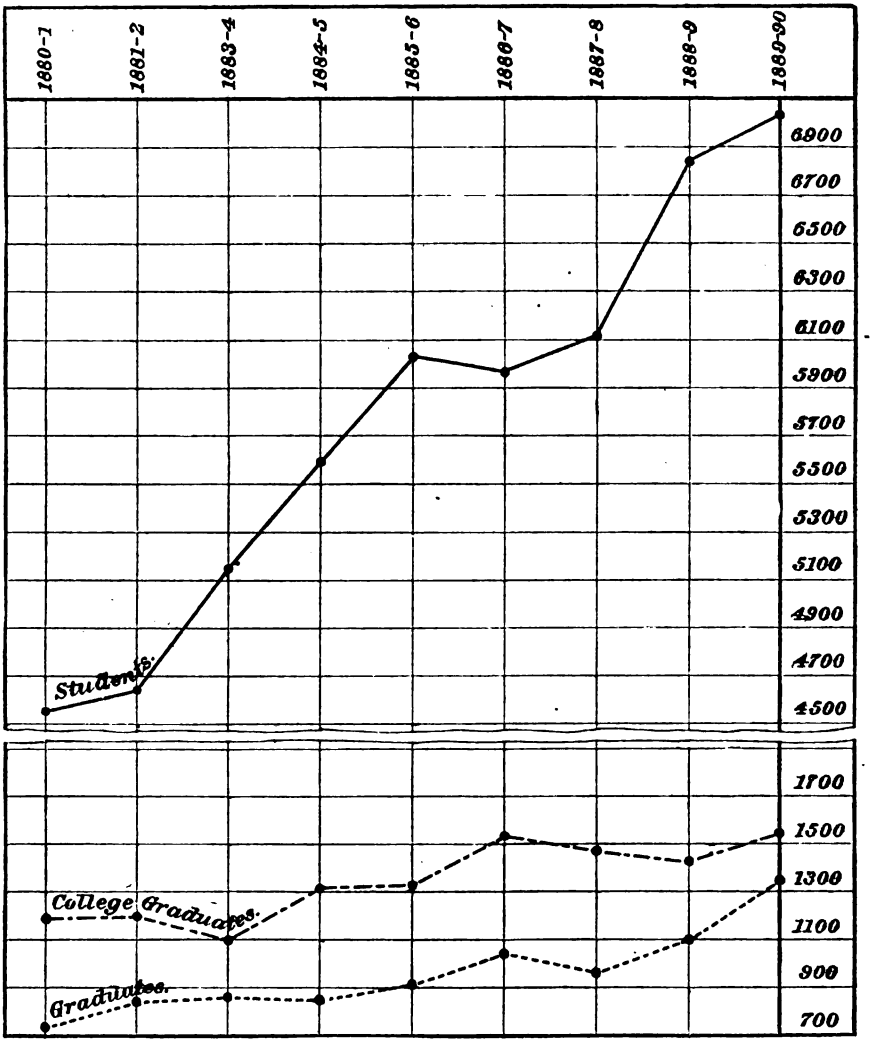
DIAGRAM 7. — *Showing enrollment, graduates, and number of students having a degree in letters or science during 1880–90, in schools and departments of theology in the United States.*



——————— Students in 1890, 7013, of whom 19 per cent. graduated in 1890 against 16 per cent. in 1881.
—·—·—·— Having degrees in letters or science in 1890, 1559.
– – – – – – – – Graduates in 1890, 1372. To every 100,000 of population 2 in 1890, 1 in 1881.

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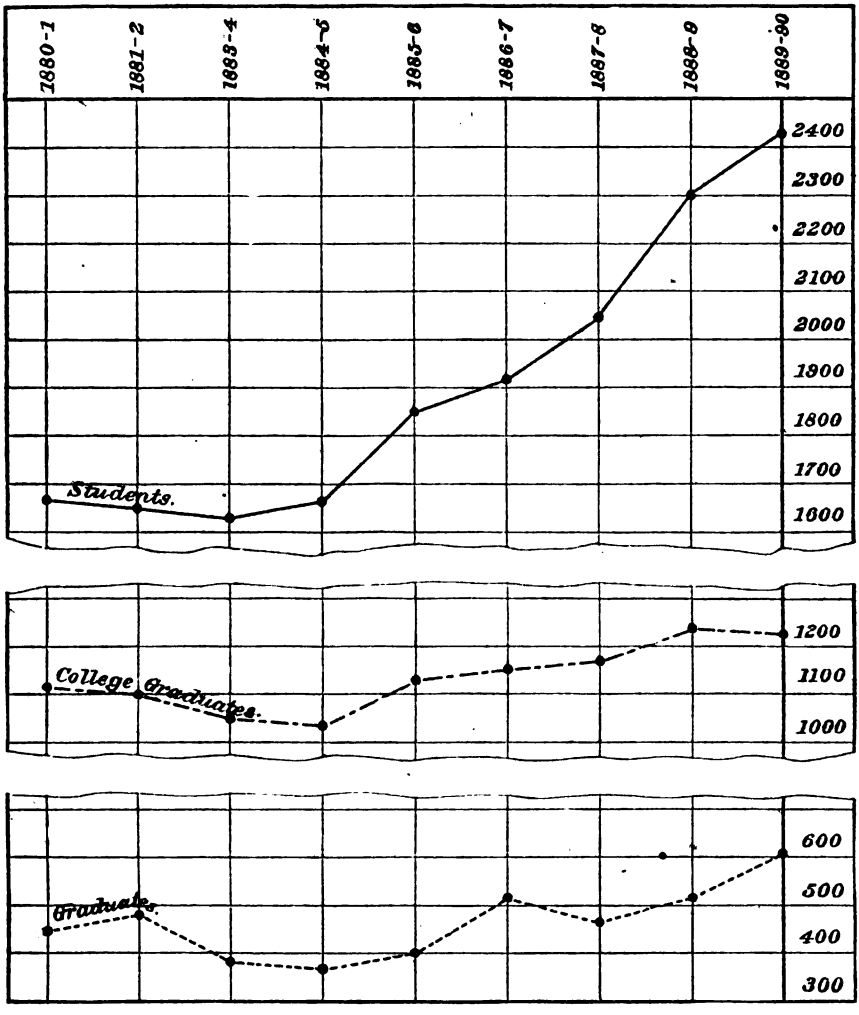
DIAGRAM 8.—*Showing same facts as diagram 7 for thirty-four schools and departments of theology which have reported regularly during the period 1880–90.*



——————— Students, 2454 in 1890.
——·——·——·—— Having degrees in letters or science, 1229 in 1890.
- - - - - - - - - - - - - - Graduates, 602 in 1890.

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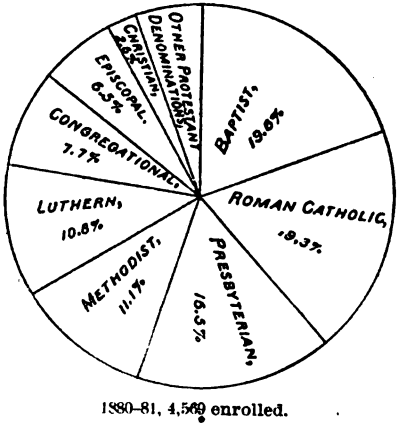
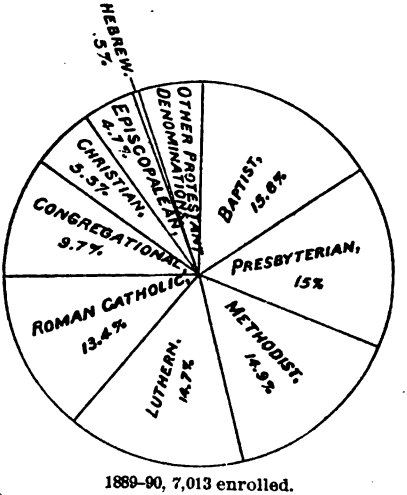
DIAGRAM 9.—*Showing percentage of students in theology enrolled in the schools of each denomination in the United States at the dates of 1881 and 1890.*



1880–81, 4,569 enrolled.



1889–90, 7,013 enrolled.

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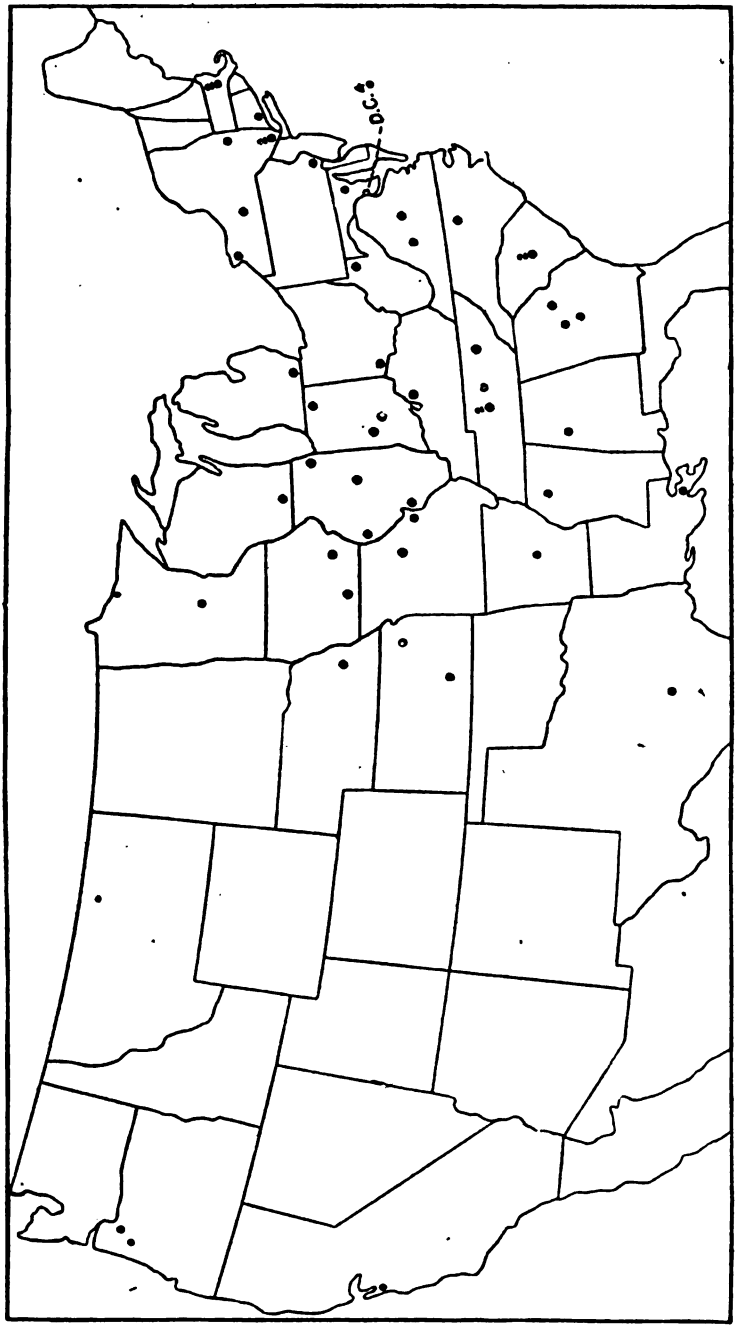

Location of schools of law in the United States at the date of 1890.

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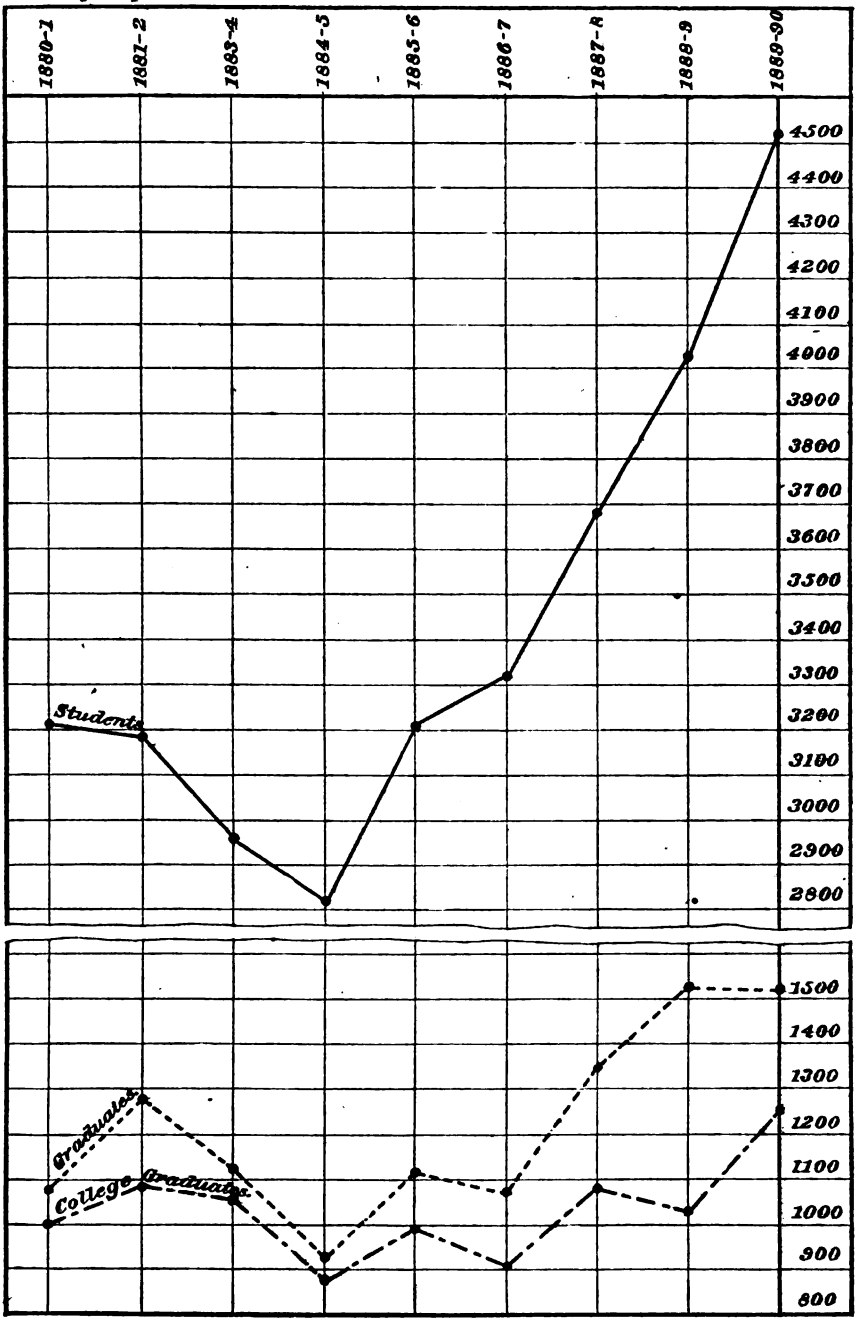
DIAGRAM 10.—*Showing enrollment, graduates, and number of students having a degree in letters or science in schools and departments of law in the United States during the period 1880-90.*



——————— Students in 1890, 4518, of whom 33 per ct. graduated in 1890 against 34 per ct. in 1881.

– – – – – – – – – Graduates in 1890, 1514 (in some instances computed). Graduates to every 100,000 of population 2.4 in 1890, 2.1 in 1881.

— · — · — · — · — Having degrees in letters or science in 1890, 1255 (in some instances computed).

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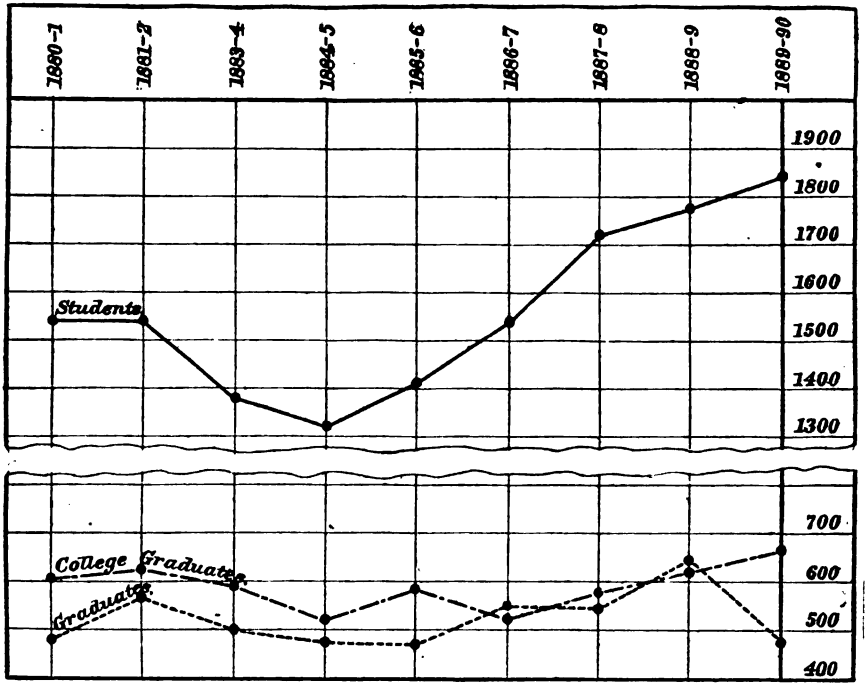
DIAGRAM 11.—*Showing same facts as diagram 10 for nine schools or departments of law in the United States which have reported regularly during the period 1880–90.*



Students, 1841 in 1890.
Having degrees in letters or science, 670 in 1890.
Graduates, 495 in 1890. (Decrease due to Columbia College extending her course in law.

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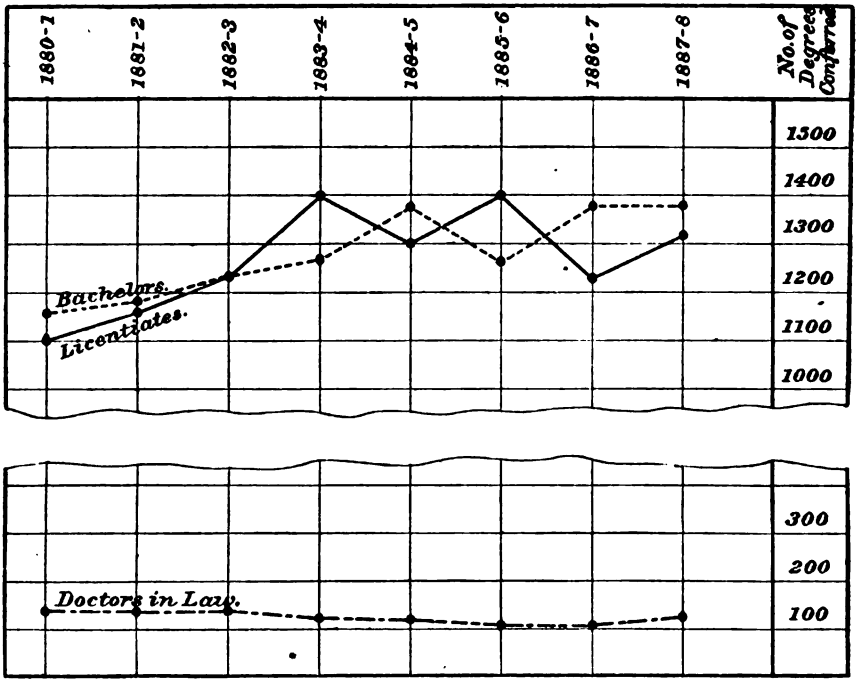
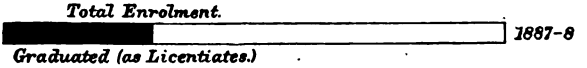
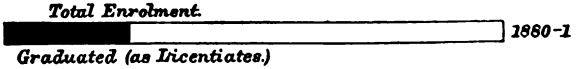
DIAGRAM 12.—*Showing number of degrees conferred annually by the fourteen faculties of law of France during the period 1880–88.*





[Scale, 2000 to the inch.]



[Scale, 2000 to the inch.]

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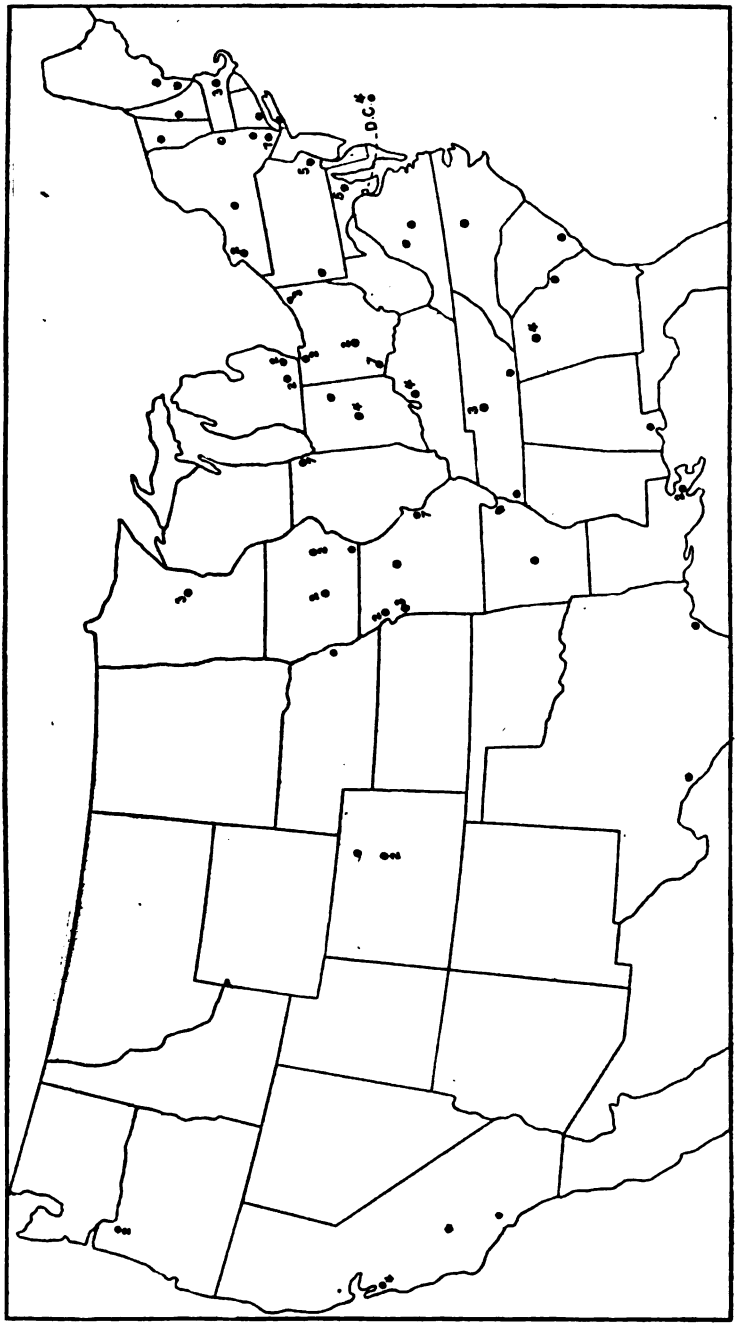

Location of schools of medicine (undergraduate) in the United States at the date of 1890.

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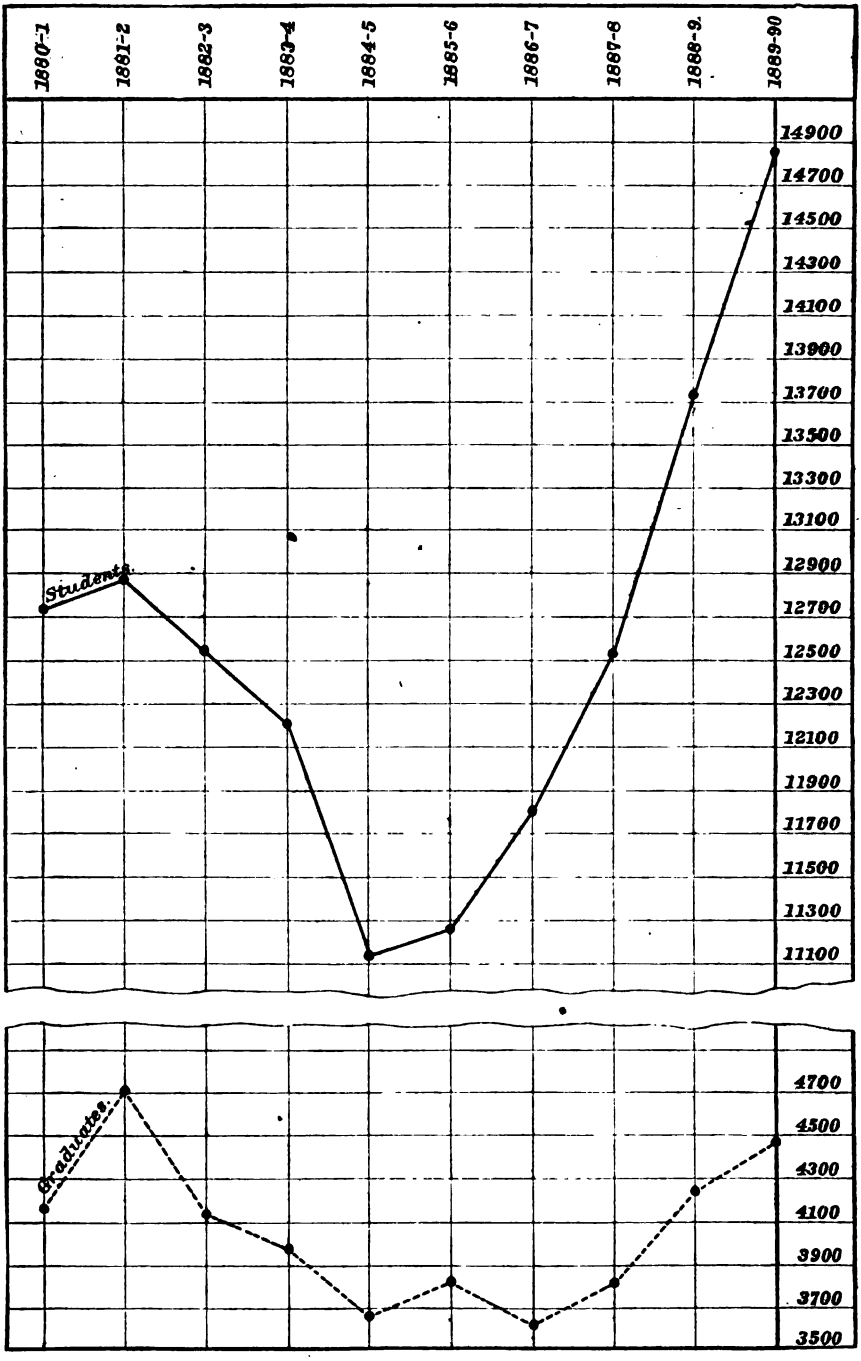
DIAGRAM 13.—*Showing enrollment and graduates for the period 1880-90 in medical schools of the United States.*



——————— Students in 1890, 14,884, of whom 30 per cent. graduated in 1890 against 33 per cent. in 1881.

- - - - - - - - - - - - Graduates in 1890, 4492. To every 100,000 of population, 7 in 1890, 8 in 1881.

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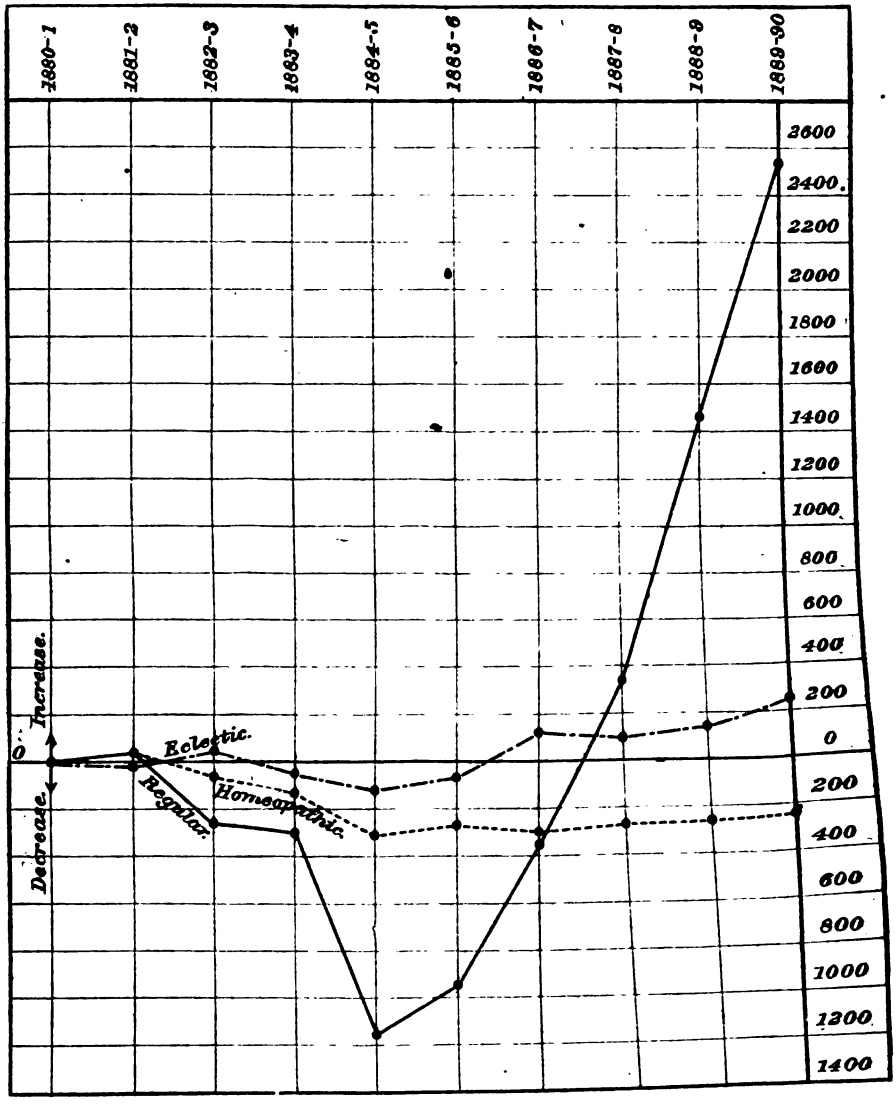
DIAGRAM 14.—*Showing fluctuation of attendance at the schools of each of the three medical sects in the United States during the period 1880–90.*



——————— Regular. 13,044 students in 1890.
—·—·—·—·— Eclectic. 661 students in 1890.
- - - - - - - - - - Homeopathic. 1128 students in 1890.

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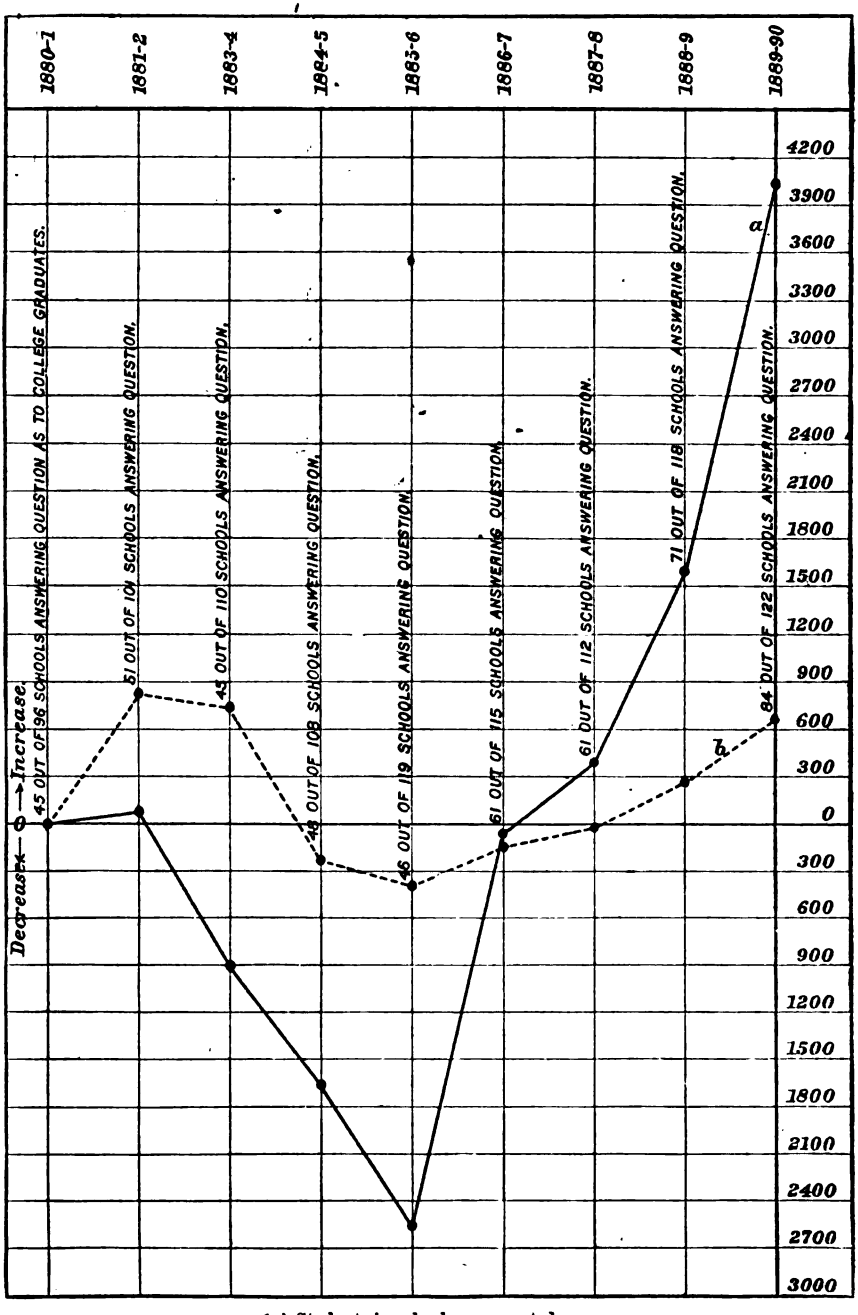
DIAGRAM 15.—*Showing relation between the number of students in certain medical schools of the United States, and the number of these students holding degrees in letters and science, during the period 1880–90.*



(a) Students in schools represented.

(b) Students holding degrees in letters or science in schools represented in (a) above.

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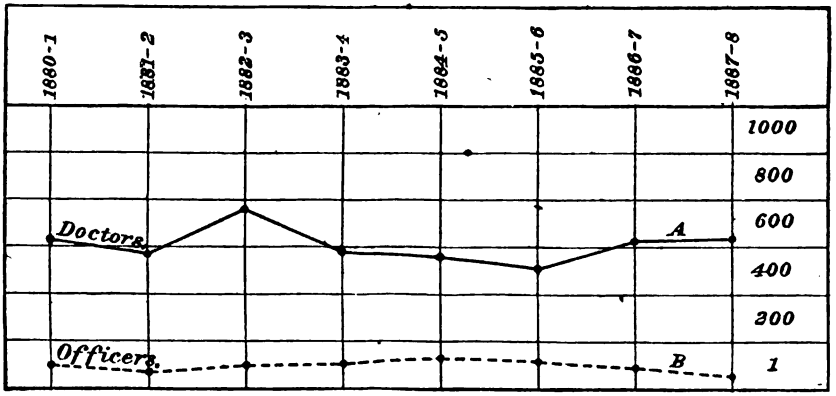
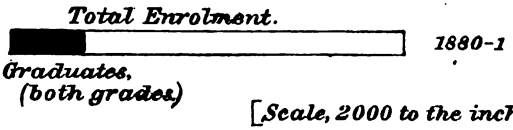
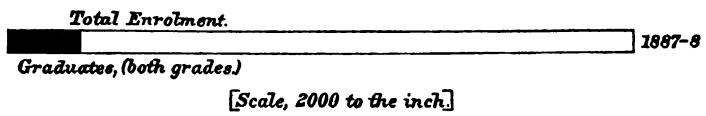
DIAGRAM 16.—*Showing number of degrees annually conferred by the six faculties of medicine, the two medical schools of "full exercise" and fifteen preparatory schools of medicine in France during the period 1880–88.*







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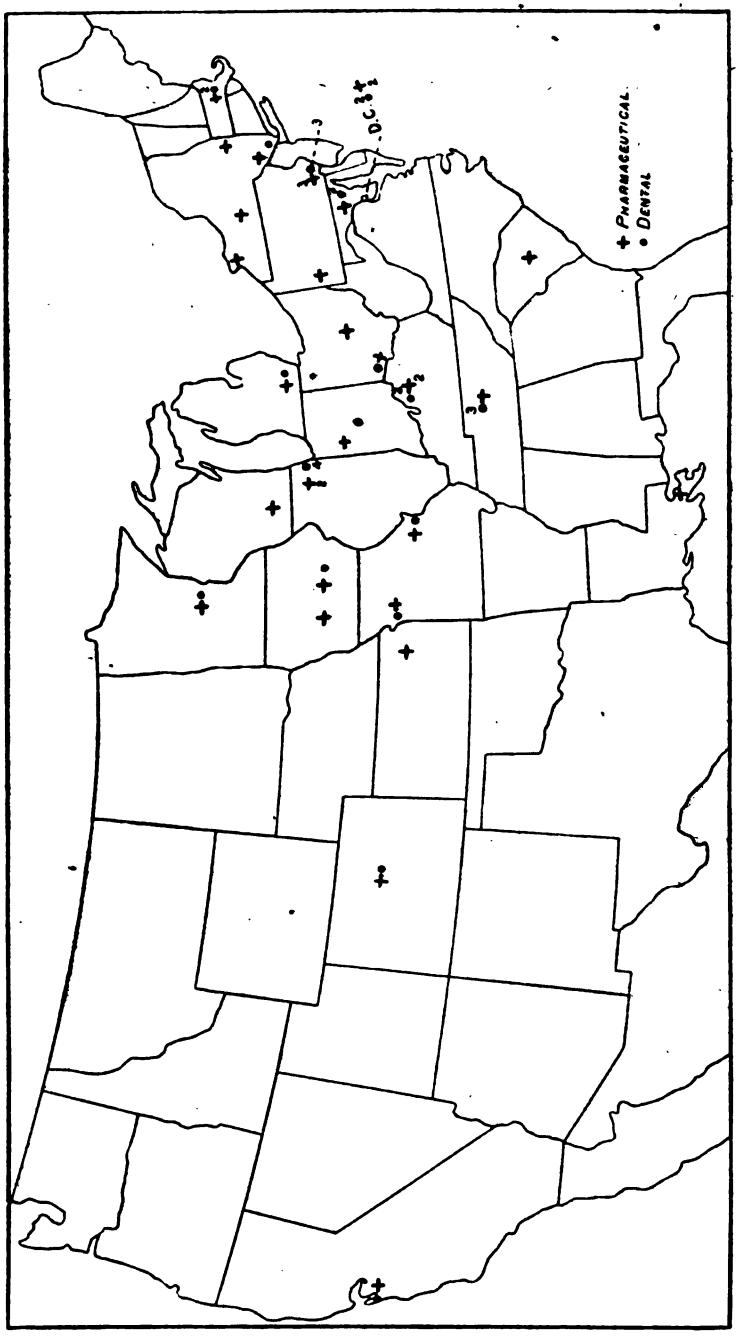

Location of schools of dentistry and of pharmacy in the United States at the date of 1890.

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DIAGRAM 17.—*Showing enrollment and graduates of schools of dentistry in the United States during the period 1880–90.*

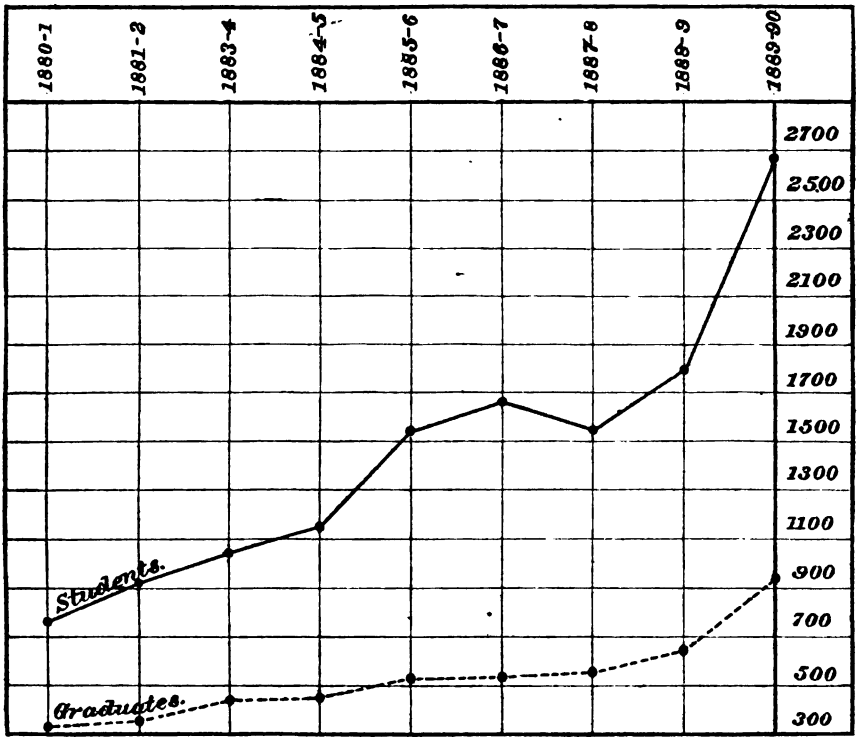

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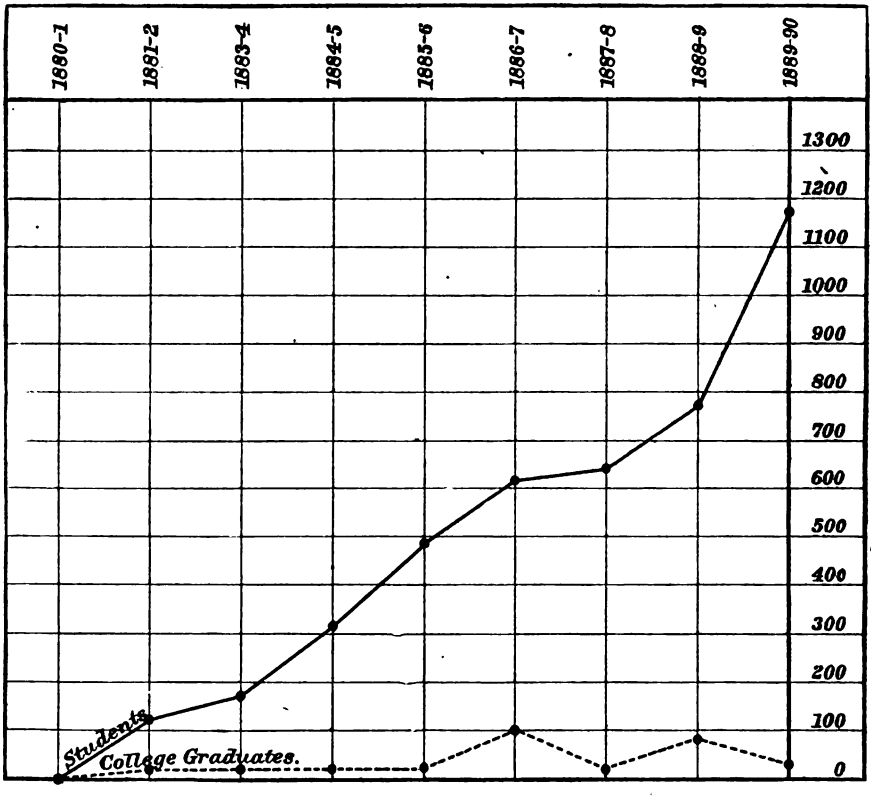
DIAGRAM 18.—*Showing the movement of population in twelve dental schools of the United States which report regularly for the period 1880-90 the number of students enrolled having a degree in letters or science. (Of these schools only six were in existence in 1881.)*



Students, 1587 in 1890.
Having degrees in letters or science, 69 in 1890.

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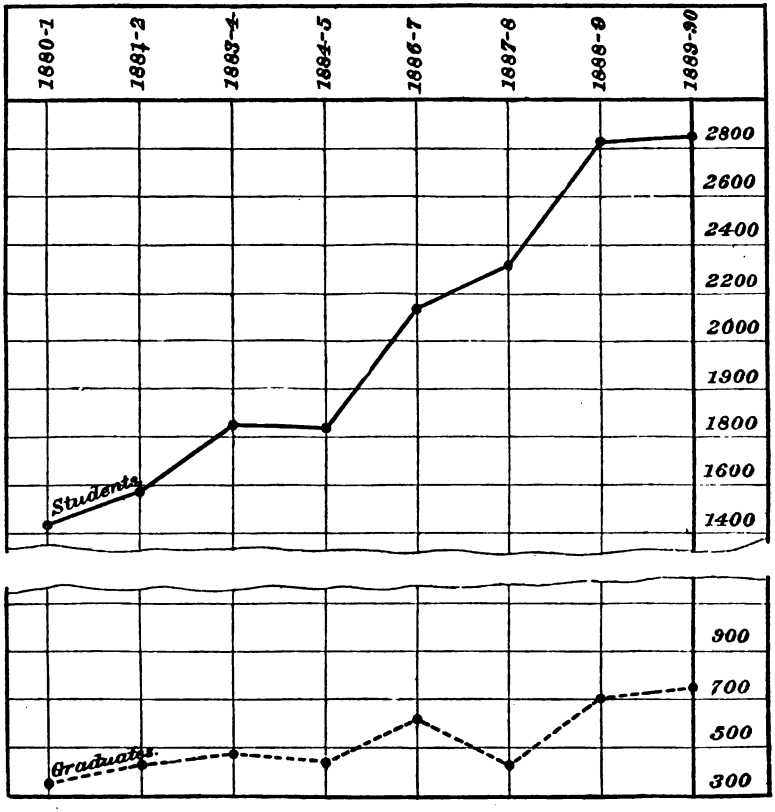
DIAGRAM 19.—*Showing movement of enrollment and the graduates in schools of pharmacy in the United States during the period 1880–90.*



Students, 2871 in 1890.
Graduates, 759 in 1890.

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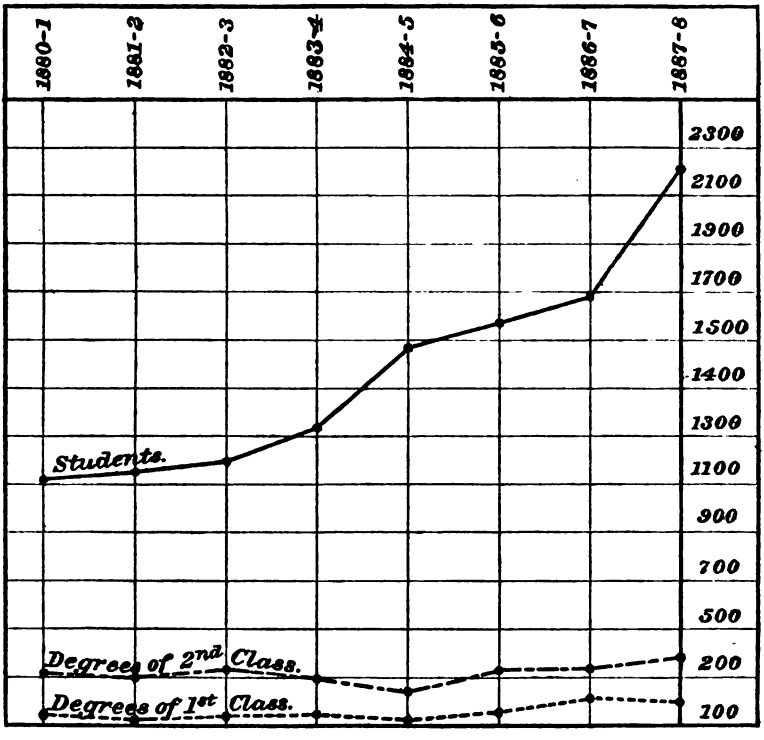
DIAGRAM 20.—*Showing number of degrees annually conferred by the six higher schools of pharmacy and mixed schools of medicine and pharmacy, the two medical schools of "full exercise," and the twenty-one preparatory schools of medicine and pharmacy in France during eight years.*



——————— Students, 2229 in 1888.
—·—·—·—·— Graduates.—Pharmacists of the 2d class.
- - - - - - - - - Graduates.—Pharmacists of the 1st class.

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DIAGRAM 21.—*Showing movement of enrollment and the number of graduates in nurse training schools in the United States during the period 1880–90.*

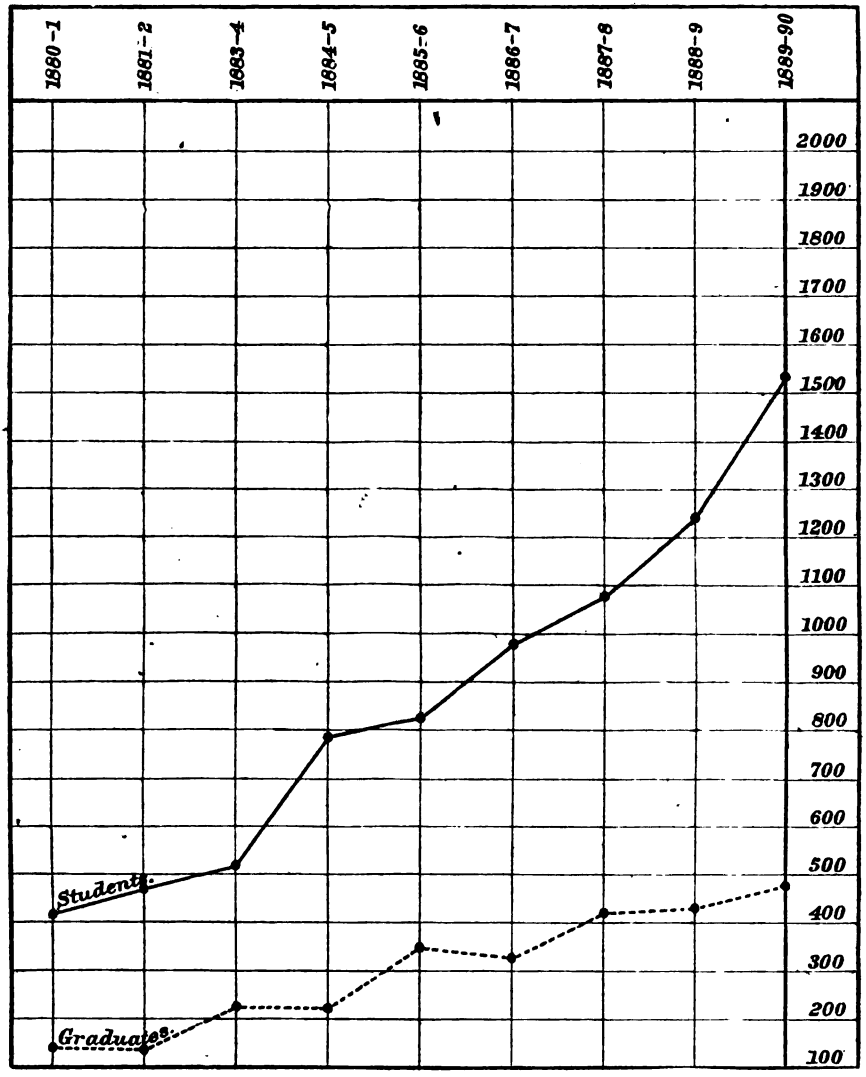

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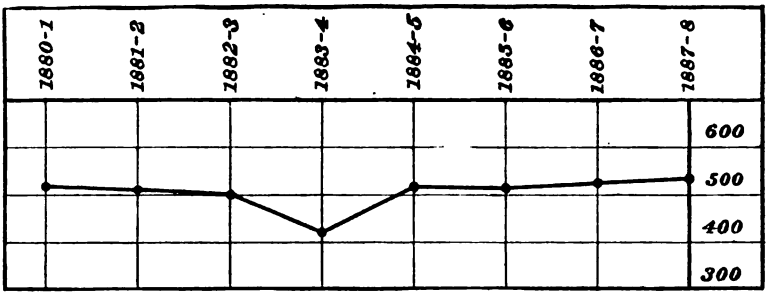
DIAGRAM 22.—*Showing number of graduates (passed an examination before faculty) in midwifery in France during the period 1880-88.*



——————— Graduates in Midwifery of 1st and 2d classes.

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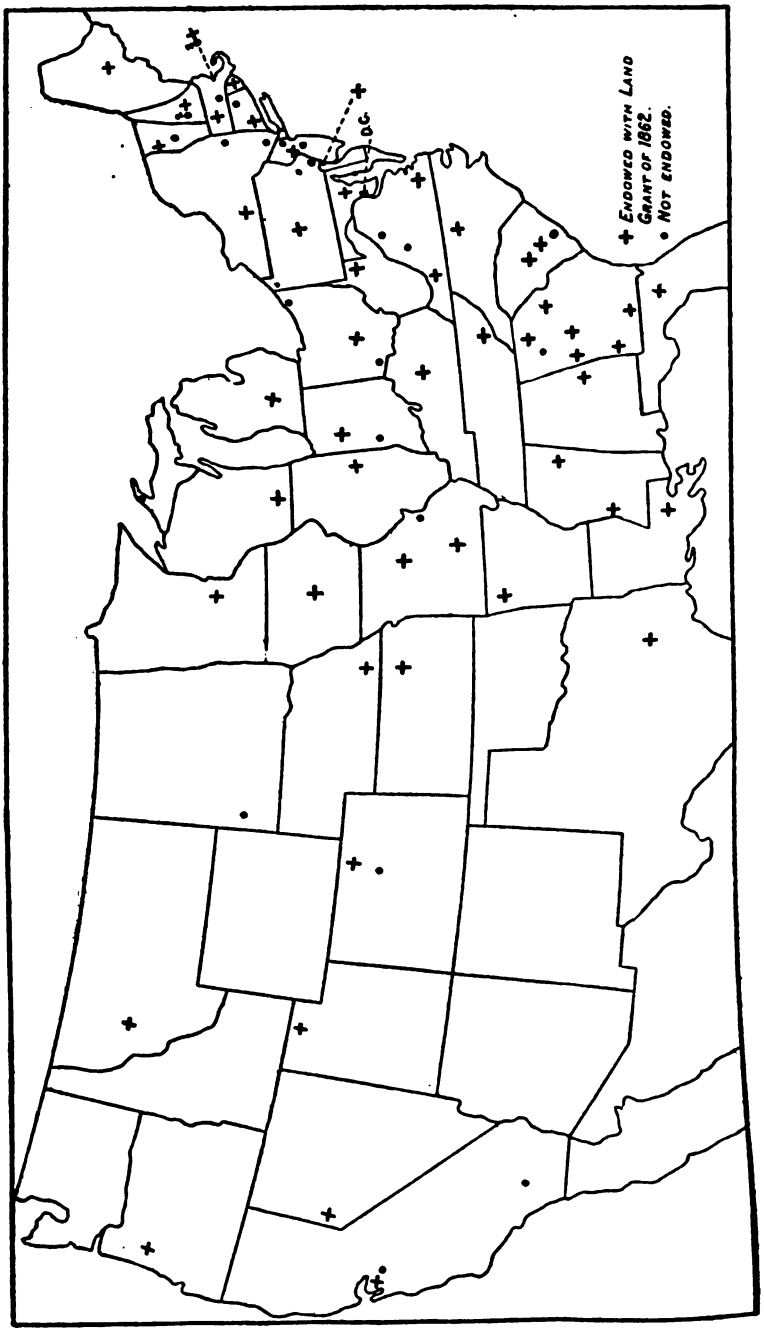

Location of schools of technology in the United States at the date of 1890.

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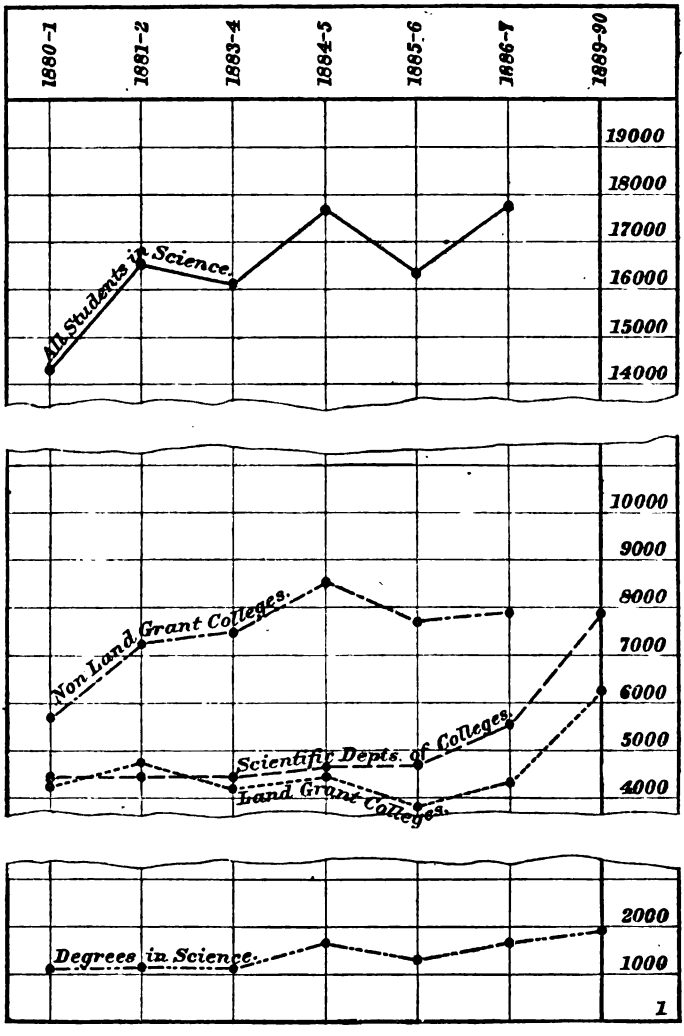
DIAGRAM 23.—*Showing number of students in scientific schools and departments of colleges and universities (excluding manual training high schools) during the period 1880–90, and the degrees in science conferred during the same period.*



———·—·—·——— Degrees in science (B. S., C. E., M. E., etc.).

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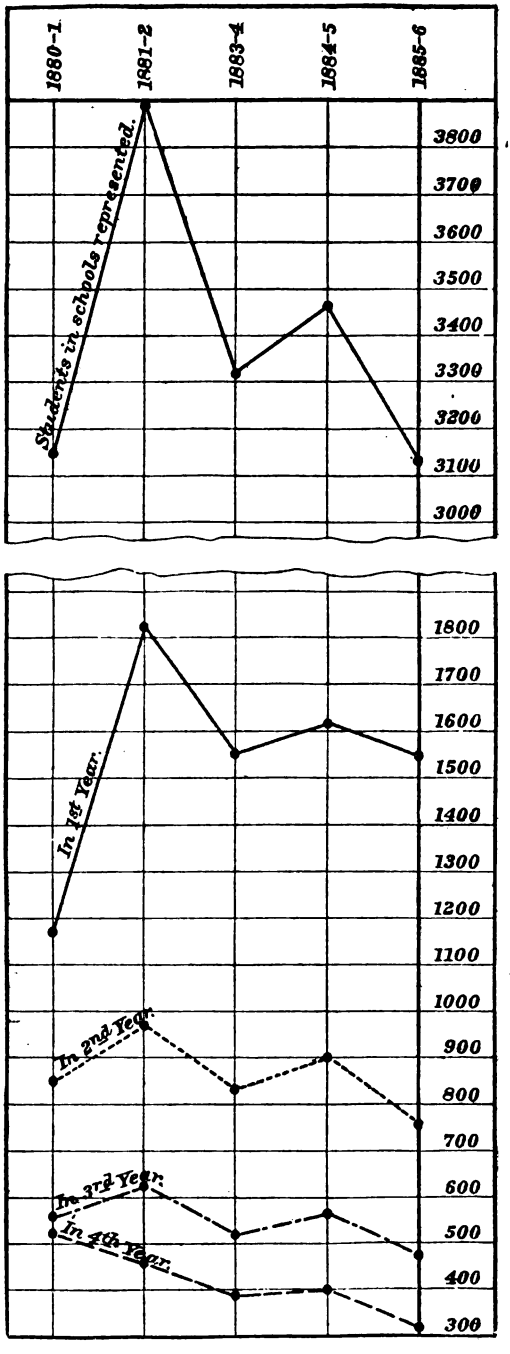
DIAGRAM 24.—*Showing distribution of attendance at colleges and schools endowed with the national land grant, from 1880 to 1886.*



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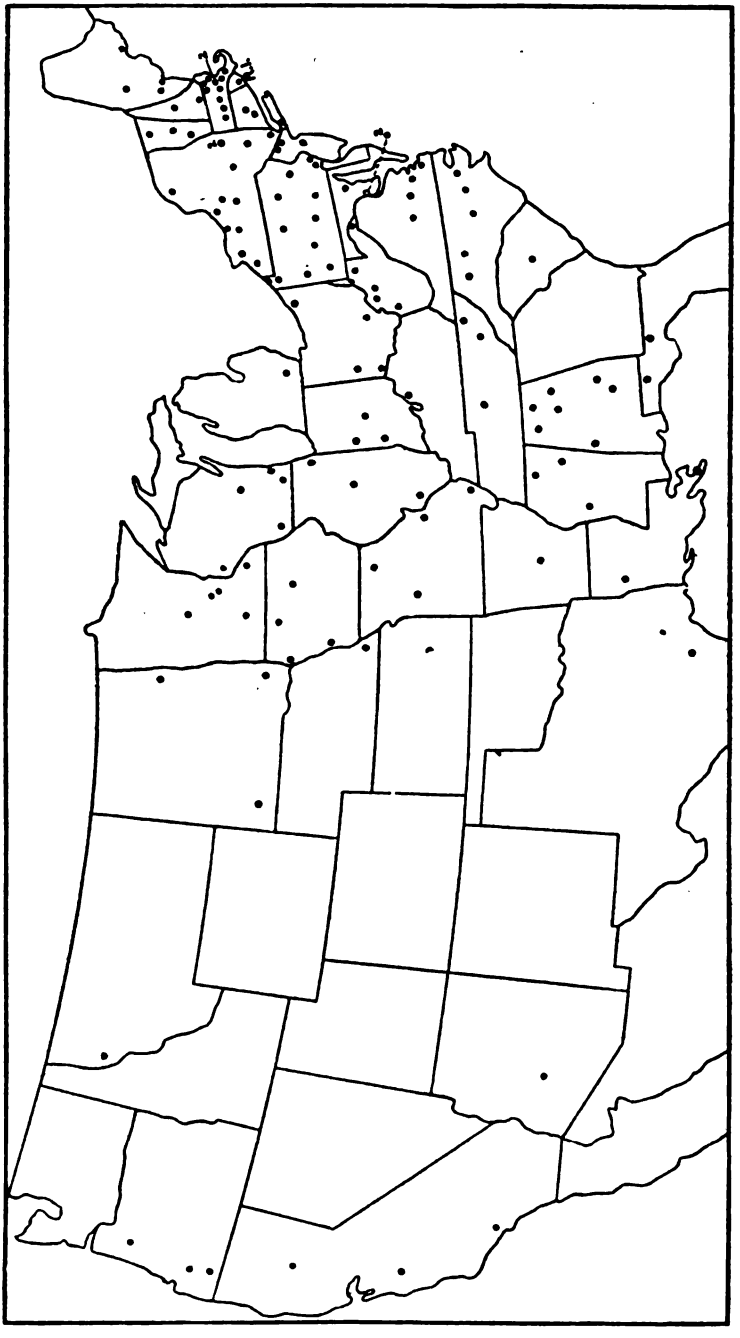

Location of public normal schools in the United States at the date of 1890.

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Location of teachers' training schools in France at the date of 1889.

[Area, 204,092 square miles; population, 37,930,759.]

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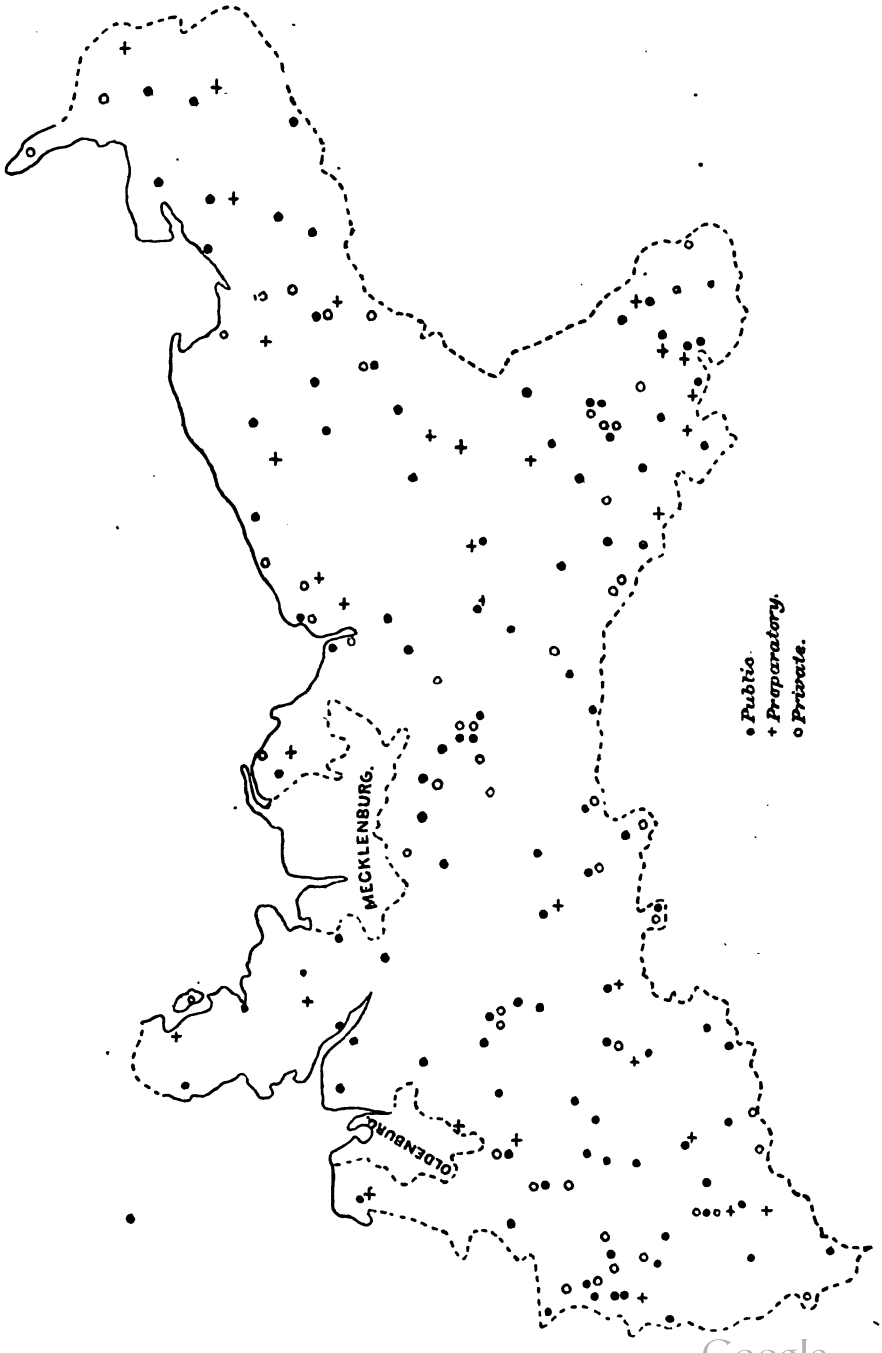
Location of teachers' seminaries in the Kingdom of Prussia.

[Area, 134,500 square miles; population, 29,959,388.]



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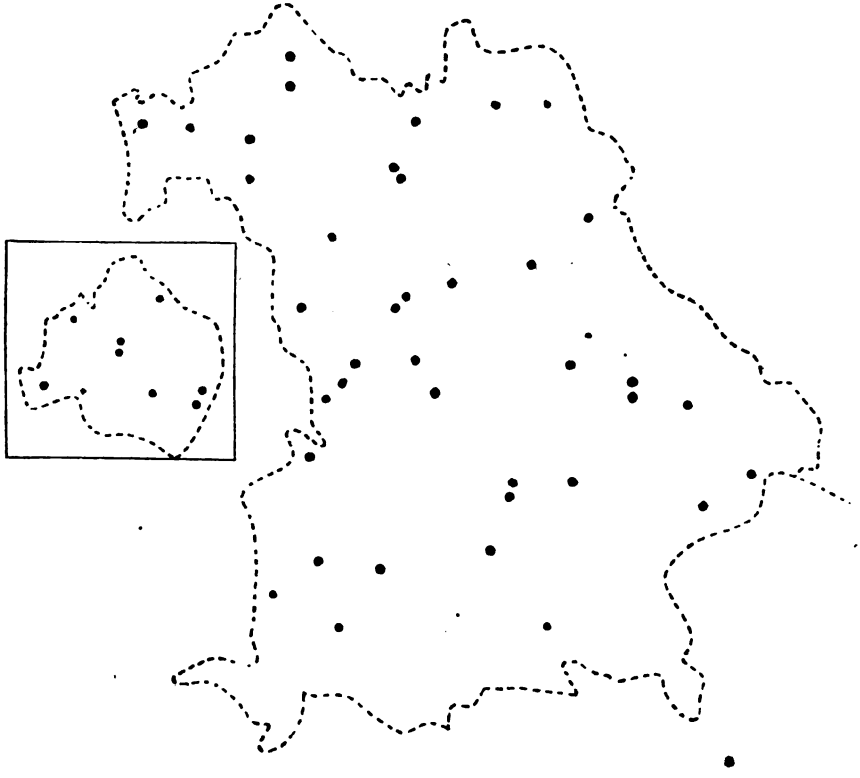
Location of teachers' seminaries in the Kingdom of Saxony.

[Area, 5,787 square miles; population, 3,500,513.]

Location of teachers' seminaries in the Kingdom of Bavaria.

[Area, 29,177 square miles; population, 5,589,382.]



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Location of teachers' training schools in the Kingdom of Würtemburg.

[Area 7,531 square miles; Population 2,035,443.]

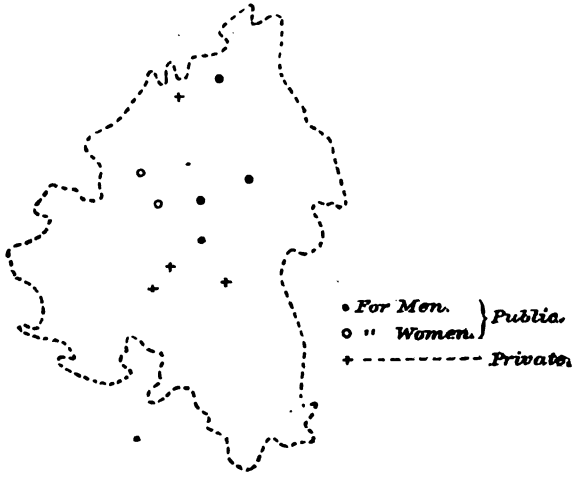

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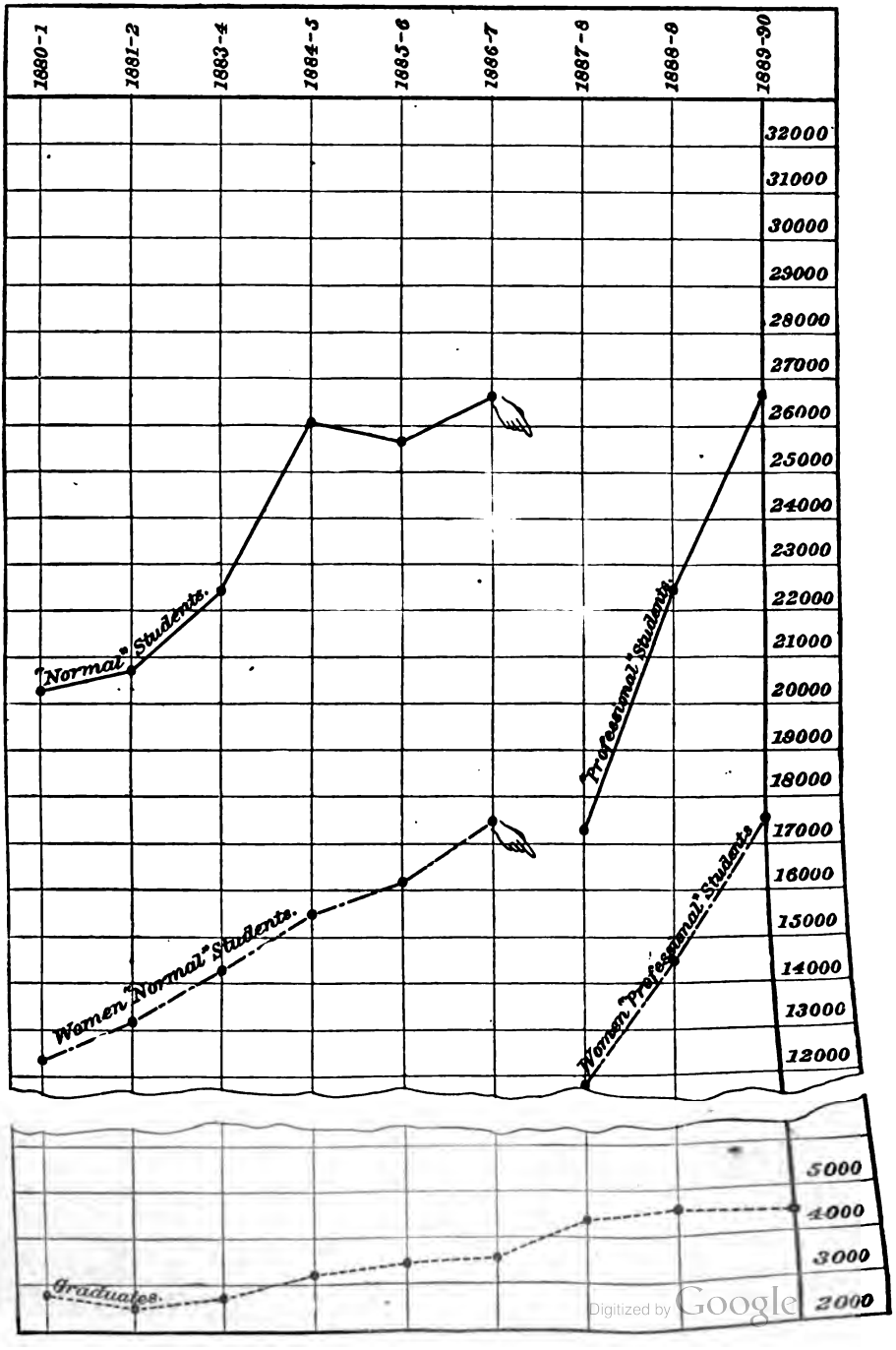
DIAGRAM 25.—*Showing number of "normal" students in teachers' training schools in the United States for the period 1880–87, and the number of "professional" students in the same class of schools during the period 1887–90, also the number of graduates (normal or professional).*



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CHAPTER X.[1]

CURRICULA OF PROFESSIONAL SCHOOLS.

If a certain number of individuals have a common quality that may be represented in numbers a statistical table may be formed. But if this common quality is expressed in a very general way, such as by the term "medical students in 1889–90," it will happen that students who are pursuing a three-years course of medicine count for as much as those who are pursuing a four-years course. It is therefore quite as important to know what and how the students in medicine for 1889–90 were taught as to know how many of them were taught in medical schools during that period.

In taking up in order the several classes of professional schools, the requisites for admission to them will be considered first, then their curricula. Statistics for the last ten years have been given in the preceding chapter, and those for the year 1889–90 will appear in full detail in the chapter which follows.

MEDICINE.

REQUIREMENTS FOR ADMISSION.

If we begin by inquiring what was required of the applicant for matriculation in 1880–81, it is shown by an inspection of the announcements and catalogues of about 80 medical schools that the situation was, in general terms, as follows:

Ten had examinations for admission covering several subjects and 14 employed some slight tests of an applicant's fitness to study medicine. The subjects of examination were elementary physics in 8 schools, arithmetic in 7, elementary Latin in 5, grammar in 4, geography in 4, algebra in 4, geometry in 3, and history in 2. Grammar and composition were determined usually from the papers submitted. The amount of physics required was generally a knowledge of Balfour Stewart's Primer of Physics or its equivalent. The Latin requirements were varied, and were intended to show the familiarity of the applicant with declensions, conjugations, common words, and simple constructions. Algebra to quadratic equations and two books of geometry were usual requirements in these branches. The Michigan College of Medicine allowed a substitution of either Greek, French, German, botany, or zoölogy in place of other studies mentioned above (except Latin). French, German, algebra, geometry, and botany were alternative subjects at Harvard Medical School, on one of which the candidate must be examined. Botany and chemistry, as found in the Science Primers, were required by the Woman's Medical College of the New York Infirmary. College diplomas, degrees from scientific schools, graduation from acceptable high schools and academies, and licenses to teach public schools were among the proofs of a candidate's fitness which were accepted in lieu of examination. In the Medical School of Missouri University all students before entering the senior class were required to pass a satisfactory examination on English grammar, rhetoric, history of the United States, and arithmetic through common fractions.

In examining the announcements of the requirements demanded of matriculates, in 1890 the reader is struck with the very frequent use of the expression "all the branches of a good English education," to which is added in the majority of cases "including mathematics, English composition, and elementary physics or natural philosophy." The phraseology varies, however; sometimes it is a "fair English education;" in other connections it is the "common-school

[1] Prepared by Mr. Wellford Addis, specialist in professional education.

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branches." In many other cases the requirements are "proficiency in grammar, arithmetic, geography, history," and even reading, writing, and spelling, and proficiency in all these subjects may be taken as a definition of a "good (or fair) English education." Such an education ought to be given in the public schools, and thus it follows that the requirement of the great majority of the medical schools of the country is a thorough common-school education. The entrance requirements of the medical schools of France are considerably higher, for in that country the matriculate must have obtained the degree of bachelor of letters and another degree, which is called bachelier ès sciences restraint pour mathématiques, and the curriculum of the German gymnasium, which is preparatory to a course of medical instruction, is quite as high and as thorough as that of the French Lycée. What the requirements in Great Britain are may be inferred from the special matriculation examination of the Bellevue Hospital School for those students who expect to present their diplomas for recognition in Great Britain. This examination embraces the following subjects: English language, including grammar and composition; arithmetic, including vulgar and decimal fractions; algebra, including simple equations; first two books of Euclid; Latin, translation and grammar, and one of the following subjects: Latin (first two books of Cæsar), Greek (St. John's Gospel), French (the first chapter of Télémaque or Charles XII), German (first part of Adler's Reader), natural philosophy, including mechanics, hydrostatics, and pneumatics (Peck's Ganot's, or Parker's Philosophy).

There are some exceptions to the average requirements in the United States which call for attention. In several instances a familiarity with Latin grammar is demanded, though in four instances this familiarity may be obtained during the course of medical instruction. For admission to the department of medicine of Harvard University the requirements are that the applicant shall write an English composition of two hundred words and write English prose from dictation, translate easy Latin prose, possess such a knowledge of physics as may be obtained from Balfour Stewart's Elements, and elect one of the following subjects: French, German, elements of algebra or of plane geometry, or botany. At the Yale Medical School the requirements, with the exception of the languages, are about the same. In the case of the department of medicine of Michigan University stress is put upon a competent knowledge of zoölogy, and languages are not required, while in the case of the medical department of the University of Minnesota the examination embraces an English composition of two hundred words, Latin, French, German, or a Scandinavian language, an examination in algebra, plane geometry, or botany, and in physics. The College of Physicians and Surgeons in the City of New York (Columbia College) has an entrance examination in which the Latin (Cæsar or Sallust), algebra, and geometry are fully equal to the requirements in those branches demanded by the above-named institutions. These schools are connected with our highest and wealthiest institutions of learning, and if they are unable to ask as much as the departments of arts, with which they are affiliated, how is it to be expected that non-university schools, wholly dependent upon themselves for support, both moral and pecuniary, can ask as much?

In addition to the examination as to intellectual attainments a certificate as to moral character is required.

It is not to be supposed, however, that the attendance at these schools is made up for the most part of those who pass an examination which is "satisfactory to the faculty" of the school; for that examination is only required when the candidate can not present a diploma from a college, high school, or academy, normal school, or, in some cases, a teacher's certificate entitling him to teach in a public school of his State.

The number of the matriculates who have obtained a degree in letters or science has been collected by this Bureau for a number of years. Consulting this record, which is by no means as perfect as it should be, the following facts are developed:

Of the 96 institutions reporting to the Bureau in 1881, 42 returned 1,111 students having a degree in letters or science, and 3 report definitely that they had no scholar with a degree. In these 45 institutions there were 6,625 students. Thus in every hundred students there were 17 who, it may be said, had been liberally educated. If the other institutions (51) had reported specifically that they had no student who had received a degree in letters or science, the whole attendance as far as reported to this Bureau (11,399) could be compared with the number of students who were reported as having obtained a degree by the schools which answer the question definitely in the affirmative or negative and no error occur.

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If we assume, however, that these 51 institutions had no matriculate in attendance having a degree in letters of science, then, to do justice to the different parts of the country, comparison may take the following form:

	New England and Middle States.	South Atlantic States.	South Central States.	North Central States.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Ratio of matriculates having degree in letters or science to students in all medical schools of each section of the country	14	6	2	7
Ratio of matriculates having degree in letters or science to students in medical schools that report students with such degrees in each section of the country	20	11	8	15

Continuing this sifting process by considering eleven schools of medicine which are departments of a university, it appears that at—

	Attendance, 1880–81.	Had a degree in letters or science.
		Per cent.
Harvard Medical School	243	49
Yale Medical School	21	48
College of Physicians and Surgeons (Columbia College)	547	34
Medical department, University of Pennsylvania	375	26
Medical School of Maine (Bowdoin College)	112	20
Medical department of the University of the City of New York	623	49
Medical department of University of Vermont	50	12
New Hampshire Medical Institution (Dartmouth College)	94	7
Department of medicine and surgery, University of Michigan	380	10
Medical School of the University of Missouri	40	43
Chicago Medical College (Northwestern University)	150	20
Total	2,635	*a*22

a Average per cent.

In 1886–87, 60 schools reported the number of their matriculates that had received a degree in letters or science and 5 schools definitely reported that they had no person thus distinguished among their students. In these 65 schools there were 6,690 students, of whom 15 in every 100 had received a degree in letters and science. Taking the same individual schools as before, the showing is as follows:

	Attendance, 1886–87.	Had degree in science and arts.
		Per cent.
Harvard Medical School	260	55
Yale Medical School	26	31
College of Physicians and Surgeons (Columbia College) *a*	606	31
University of Pennsylvania, medical department	406	28
Medical School of Maine (Bowdoin College)	85	19
Medical department of the University of the City of New York	631	7
Medical department of University of Vermont	190	10
New Hampshire Medical Institution (Dartmouth College)	[61]	(*b*)
Chicago Medical College (Northwestern University)	134	22
Department of medicine and surgery, University of Michigan	321	13
Medical School of the University of Missouri	[16]	(*b*)
Total	2,659	*c*23

a The total number of students (188) possessing a degree at time of matriculation is taken from president's report, 1890.
b No answer.
c Average per cent.

These figures show a slight increase during the six years; but, if the institutions making no answer could have been included, a decrease might have resulted, which would have tended to confirm the average for the 65 schools which furnished definite reports for 1886–87.

Finally let us consider the statistics of the year 1889–90. One hundred and ten institutions have reported to this Bureau, 78 of which report definitely the number of students having a degree in letters or science or that they have no student possessing such a degree. In these 78 schools 15 per cent of the matriculates had obtained a degree before entering upon the study of medicine. The absolute figures are, 16 schools with no students enrolled who had obtained a literary or scientific degree, 62 schools with 1,382 students having a degree; total enrollment in the 78 schools, 9,389. Adding to the enrollment of the 78 schools the enrollment of the 32 which answer "Don't know," "No data," etc., the total enrollment of the 110 schools reporting is 13,793. Comparing the enrollment in these 110 schools with the number of matriculates reported by the 78 schools as having degrees, the result is that 10 per cent of the enrollment in the medical schools of the country were possessors of a degree in letters or science. Considering the States by sections and including only the 78 schools which report 15 per cent of their matriculates having a degree in letters or science, it is found that 18 per cent of the matriculates in the medical schools of the North Atlantic Division had a degree in letters or science, 13 per cent of the South Atlantic division, 18 per cent of the South Central division (including Tulane University, estimated at 25 per cent), 9 per cent of the North Central Division, and 9 per cent of the Western Division. These figures show a diminution for the schools of the North and an increase for those of the South.

Considering the statistics of the eleven individual medical schools as before, at—

	Attendance, 1889–90.	Had degree in science or letters.
		Per cent.
Harvard Medical School	290	43
Yale Medical School	55	30
College of Physicians and Surgeons (Columbia College) *a*	619	36
University of Pennsylvania, medical department	485	26
Medical School of Maine (Bowdoin College)	81	21
Medical department of the University of the City of New York	633	17
Medical department of the University of Vermont	205	19
New Hampshire Medical Institution (Dartmouth College)	83	16
Chicago Medical College (Northwestern University)	237	3
Department of medicine and surgery, University of Michigan	372	10
Medical School of the University of the State of Missouri	21	6
Total	3,081	*b*23

a These figures are taken from the president's report for 1890. The medical department made no report on the blanks prepared for replies from such schools sent out by this Bureau.
b Average per cent.

From the foregoing statements it appears that there has been a slight reduction in the number of matriculates (17 in every 100 in 1881, 15 in 1890) at medical schools, who had received a degree in letters or science; while the statistics of the eleven departments of universities (where one would expect a large per cent of the matriculates to have obtained degrees) show that there has been an increase of but 1 per cent in the matriculates who had obtained a degree in letters or science. Indeed in the instance of the College of Physicians and Surgeons (the medical department of Columbia College) of New York City a decrease of 2 per cent is shown when the per cent of enrollment for the decade 1870–1880 (37 per cent) is compared with that for 1880–1890 (35 per cent); or comparing the per cent for the first half of the decade 1880–1890 with the second half, a reduction of over 3 per cent is shown.

The question, then, is: Has there been no improvement in the scholarship of the matriculates at medical schools?

The first of several questions asked on the form of inquiry sent out at the close of the school year 1889–90 was "Have you noticed during the last decade that the students of later years were in a scholastic sense better prepared to enter upon the study of medicine than those who preceded them?" Of the 86 "regular" schools reporting, 75 answer the question, 67 in the affirmative and 8 in the negative. Of 7 "eclectic" schools only 1 answers "no." Of 13 "homeopathic" schools, 12 answer yes, 1 fails to answer.

How are these facts to be reconciled? Statistics show that the number of matriculates having a degree is not increasing relatively to attendance (see

diagram 15, Chapter X), and yet the medical schools are almost unanimous in asserting that there has been an improvement in the scholarship of the matriculates. Is this unanimous report as to advanced scholarship to be attributed to an increased attendance at the secondary schools of the country? Are more graduates of high schools matriculating at medical schools? If we compare the attendance of secondary schools (exclusive of public high schools and departments of normal schools and of institutions for superior instruction) for 1880–81 with that for 1888–89 we find that there has been an increase in the attendance of schools for secondary instruction of 13 per cent. If we compare the attendance at the public high schools of one hundred and thirty-two cities in 1880–81 with the attendance in the public high schools of those cities in 1887–'88 an increase of 37 per cent is shown. Or, speculating upon the subject from the still more general standpoint of population and considering that the public high school is always a feature of urban life, it may be concluded that the increase of 7 per cent in urban population during the decade 1880–1890 has increased the high-school attendance of the country at large.

Some confirmation of the idea that the improvement in the scholarship of matriculates at medical schools is due to high schools is found in the great protest against secondary and collegiate education because it tends to overcrowd the learned professions, especially those of law and medicine. But a protest is entirely too insecure a foundation to build a theory upon. What is necessary is information as to the localities whence the matriculates at medical schools come, whether from towns and cities or from the rural districts, for public high schools with few exceptions are located in centers of population and rest on a system of grades beneath them from which they are fed. The public high school of the rural districts it should be said is, in many cases, the State normal school or agricultural college.

In examining the reports made to the Bureau some expressions are found that corroborate what has been suggested above. A medical school of California, in answering the question as to a better scholarship, answers, "Decidedly so," and adds: "18 had attended universities, academies, or colleges, 12 were graduates of high schools, 17 were graduates of State normal schools, or held educational diplomas or first-grade certificates, and 40 passed examinations." A southern school, in denying improvement, adds: "The common-school system has destroyed the private schools, and only an elementary education can be had outside." (There is no normal school in this correspondent's State.) The medical department of a celebrated university of the Northwest replies: "Our students average far better now than formerly, as nearly all who enter now [who are not possessors of a degree] are graduates of high schools;" while one of the foremost universities of the Southwest reports in the affirmative, adding, "many of our matriculates being graduates of high schools or universities." A college of Ohio makes a very striking answer in saying: "Yes, as to students who enter under 25 years of age; no, as to those over 25 years;" and a Southern college answers: "I have noticed an improvement in this respect, but it must be remembered that the students from the South now seeking admission to our colleges received their education (literary) during the decade following the war when educational matters were chaotic."

Of 110 schools, 88 answer the question: "Has the average age of matriculates advanced?" Two-thirds of these answers are no, and 10 of them say the average has diminished. The Hospital College of Medicine (Central University) reports the age of seniors in 1880 as 26, in 1885 as 28, and in 1890 as 27. One college reports "age diminished; mental caliber advanced."

THE CURRICULUM.

THE CHARACTER OF THE CHANGE IN THE COURSE DURING THE DECADE AS REPORTED BY THE DEANS OF THE SEVERAL SCHOOLS.

In reply to a general question as to the character of the changes during the decade in the medical curriculum, especially in regard to practical instruction, one-fourth of the schools answer "no change," or ignore the question. The general tenor of the affirmative responses may be classified under two heads, to wit, increase of the time devoted to the study of medicine, and increase in the time devoted to laboratory and chemical instruction. The answers as to the time devoted to study may be classed under two heads, one class of answers showing a very decided movement to increase the course from two to three years and to grade it, and the other a tendency to prolong the session from five or six to eight months. The replies indicate a strong tendency to introduce laboratory instruction, chemistry and histology being the subjects most frequently mentioned. Clinical in-

struction also appears to be a subject in which improvement has been made. Entrance examinations, higher requirements for graduation, and recitations from text-books are only mentioned four or five times in each case. It is not to be supposed that all these subjects should occur to the gentlemen who answered the inquiry as they read the question on the blank. One thing would suggest itself to one and another to another. What appeared to each at the moment as most important was jotted down in the small space allowed for the answer. It is, therefore, surprising to find so many, though relatively few, answering the question in the same way.

With this preliminary view of the character of the advance during the decade, and a reference to the summary of the condition of medical instruction in 1881, let us attempt to ascertain its condition in 1890.

The first question that naturally is asked is, "What is considered to be a good preparation for admittance to practice medicine?" The regulations of the U. S. Army require the candidate to pass in the following subjects:

I. The physical examination will be rigid; and each candidate will, in addition, be required to certify "that he labors under no mental or physical infirmity, nor disability of any kind which can in any way interfere with the most efficient discharge of any duty which may be required."

II. Oral and written examinations on subjects of preliminary education, general literature, and general science. The board will satisfy itself by examination that each candidate possesses a thorough knowledge of the branches taught in the common schools, especially of English grammar, arithmetic, and the history and geography of the United States. Any candidate found deficient in these branches will not be examined further. The examination on general science will include chemistry and natural philosophy, and that on literature will embrace English literature, Latin, and history, ancient and modern. Candidates claiming proficiency in other branches of knowledge, such as the higher mathematics, ancient and modern languages, etc., will be examined therein, and receive due credit or their special qualifications.

III. Oral and written examinations on anatomy, physiology, surgery, practice of medicine, general pathology, obstetrics and diseases of women and children, medical jurisprudence and toxicology, materia medica, therapeutics, pharmacy, and practical sanitation.

IV. Clinical examinations, medical and surgical, at a hospital, and the performance of surgical operations on the cadaver.

Due credit will be given for hospital training, and practical experience in surgery, practice of medicine, and obstetrics.

The Illinois board of health, so well known by its activity in investigating the value of medical diplomas, has a schedule of minimum requirements of ten subjects—anatomy, physiology, chemistry, materia medica, and therapeutics, theory and practice of medicine, pathology, surgery, obstetrics, and gynæcology, hygiene, and medical jurisprudence.

But these curricula are a mere framework, so to speak, to be clothed with flesh according to the taste and conscientiousness of the instructors and examiners. Nor is the order indicated in which these special studies should be pursued, much less the reason why they should be pursued at all. If we turn to France we may obtain some information on both these points.

It is well known that professional instruction in France has been remodeled during the last ten or twelve years. The reform began with the schools or faculties of medicine, and in 1878 the following decree was issued by the minister of public instruction:

"ARTICLE 1. The course of study leading to the degree of doctor of medicine lasts four years. Of this period the first three years may be spent in the 'faculties' [*i. e.*, schools taught by the faculty using that word in our sense] or in the schools of full exercise [*i. e.*, schools taught by a corps of instructors who can not grant degrees], or in preparatory schools of medicine and pharmacy [*i. e.*, those which only educate for an inferior grade of physician or pharmacist]. The studies of the fourth year can only be pursued in a faculty or a school of full exercise.

"ART. 2. * * * The student undergoes five examinations and sustains a thesis. The second, third, and fifth examinations are divided into two parts. Examinations at the end of each year are suppressed.

"ART. 3. The five examinations are as follows: First, physics, chemistry, medical natural history. Second, part 1: Anatomy and histology; part 2: Physiology. Third, part 1: Surgery, accouchements, operative medicine; part 2: Medicine (pathologie interne), general pathology. Fourth: Hygiene, medical

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jurisprudence, materia medica, and pharmacology. Fifth, part 1: Surgical and obstetrical clinics (clinique externe et obstétricale); part 2: Clinical medicine, practical evidence of work in pathological anatomy (clinique interne, épreuve pratique d'anatomie pathologique).

Thesis: The candidate sustains this test upon a subject chosen by himself.

"ART. 4. The first examination comes off between the fourth inscription and the fifth [*i. e.*, after 12 or 15 months of study]; the first part of the second examination between the tenth and twelfth inscriptions and second part between the twelfth and fourteenth inscriptions. The third examination can not be taken before the expiration of the sixteenth trimonthly period of study. Every candidate who shall not have passed the first examination by November at the latest shall be adjourned to the end of the year and can take no inscription during the course of that year.

"ART. 5. Candidates for the doctor's degree, the students of the schools of full exercise and the preparatory schools, are examined before the faculties at the times stated in the preceding article; the first examination, however, may be taken, after the twelfth inscription. In such cases they must stand both parts of the second examination before taking the thirteenth inscription, but the student following this course is subjected during each semester beginning with the second year of studies to interrogations the results of which are transmitted to the faculties that they may be considered in the final examination for the degree.

"ART. 6. The inscriptions for the degree of officer of health (the lower medical grade) shall in no case be converted into an inscription for the doctor's degree. This conversion, however, may be authorized in the case of officers of health who have practiced medicine during two years at least.

"ART. 7. Practical work in the laboratory, dissection, and hospital attendance are obligatory. Each annual period of work in the laboratory, and in dessecting covers a semester. The hospital attendance (le stage près des hospitaux) shall be two years at the least."

When satisfied that an attempt at reform is not merely a whim or the ignorance of the reformer, the intelligent inquirer immediately asks to know the grounds upon which the change is made. What then is the motive that has induced the French legislature to modify the law of 1803? M. Wurtz,[1] as a member of the superior council of public instruction, gives several in reporting on the desirability of adopting the provision contained in the above decree. His remarks are in brief as follows:

The old law of 1803 prescribed that an examination should be made at the end of each of the first three years of the course (without value in obtaining the degree however), and then five examinations more when the fourth and last year of study had been completed. In 1825 the examinations at the end of the year were abolished and the five final examinations distributed through the course of four years. But this was found to bring the examinations too near together and to cause the student to slight his studies (la scolarité était abrégée), inasmuch as the most important examination (on clinical surgery and medicine and accouchements) was put off until the last year. This caused a new regulation in 1846, which, rejecting the examinations for the degree at the end of the whole course, instituted examinations at the close of each year. Although these annual examinations kept the student busy, thirty years of experience had shown their weakness as tests of capacity and as a means of discipline. The object in drawing the above law was to divide the four years of study into periods, in such a manner that each period would be devoted to several related subjects and could be closed with a test examination on those subjects.

The question then became a purely pedagogic one. In what order should the periods follow each other? The degree of bachelier ès lettres testified to the medical student's literary qualifications, and the modified degree of bachelier ès sciences testified to his proficiency in the natural and physical sciences. Should the student, possessing such intellectual maturity and such knowledge of those sciences which are the necessary introduction to the study of medicine, proceed immediately to the study of anatomy and physiology, which are the foundation of medicine? No, says M. Wurtz, the medical student must study physics, chemistry, and natural history in a course that is neither a repetition nor even a development of his scientific studies in a lycée. The student is now to study these subjects as applied sciences, and to them he is to devote one year.

[1] Dean of the Paris Faculty of medicine from 1866 to 1874, member of the institute, professor of chemistry at the Sorbonne, senator of France, etc., etc.

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But will one year fix these subjects indelibly, especially if the first examination is the only one upon them? This was precaution the old programme had taken by keeping up the examination on physics and chemistry to the end of the course. But what followed? The first examination was frequently weak; the students were careless and the examiners indulgent; while towards the end of the course it was intolerable for the student to take his mind from his proper professional work to rectify the neglect of the first year of his course. The new programme attempts to remedy this, says M. Wurtz. The applications of the sciences to physiology, to hygiene, and to pathology [subjects of the second and third examinations] have now become so important, that it is easy to introduce in the programmes corresponding to the examinations many questions touching the application of pure science to the subjects of these examinations.

To prevent crowding the programme of the examination—a fault of the old examination scheme—an innovation was made which is the distinguishing characteristic of the new one. The second, third, and fifth examinations are divided into two parts. In the middle of the third year of the course, and eighteen months after the first examination, the candidate undergoes the first part of the second examination; at the close of the third year he undergoes the second part, after taking the twelfth inscription. In the second part of this second examination the chemistry of digestion, respiration, nutrition, composition of the blood, etc., is studied, as also the physical phenomena of hearing, seeing, and respiration as a source of heat, all very much specialized, it is true, but fruitful because of the solid foundation laid in the first year. The division of the two professional examinations, in the practical sense of the term—the third and fifth—was demanded by the faculties of medicine; for it was thought that it was too much to ask that both parts of these examinations be taken in immediate succession. It was found that under the old scheme mediocre candidates would neglect one part of the examination and prepare for the others, counting upon the benevolent intervention of an easily satisfied examiner and the indulgence of the others.

But there is another position from which the subject of teaching may be viewed. At an early meeting of the French society for the study of subjects related to higher instruction the question "of what faculties should a university be composed" was formally put to the society by its president. Dr. Le Fort, of the celebrated faculty of medicine of Paris, on this occasion, after stating the views of his faculty as far as the matter related to the faculty of medicine, proceeded to express his own, as follows:

"The place to study medicine is in the hospital and only in the hospital. Some medical savants devote themselves to laboratory study. Nothing can be better. But for the physician, who should above all things learn to care for and, if he can, cure his patients, the only school is the hospital. There may be courses in hygiene and medical jurisprudence, but there can be no theoretical course in medicine, none in surgery; there is only a course of clinics, and the professor at the same moment teaches the students the theory (of which they have obtained the principal notions from the books) and the practice."

Dr. Le Fort, speaking for himself and not for the faculty with which he is connected, may have been induced to speak so very practically in view of his opposition to bringing a faculty of medicine under the control of a contemplated "University Senate;" but it can not be denied that public opinion is with him. His position seems to be, to judge from his remarks, that instruction in medicine consists of two operations—getting the principal notions out of the books and seeing practical work done and hearing it explained at the hospital.

It is quite supposable, however, that the curriculum of a medical school has the especial object to assist the student to obtain the principal notions from the books and to obtain them correctly. At all events, we shall assume that in America the original intention of the lecture course was to perform this service (generally imperfectly performed by the physician under whom a student has been placed), that by degrees, where possible, the hospital became the field for professional sight-seeing, and in many cases a good deal more, and that during the last decade the laboratory has been added to the instruction of the lecture-room and the clinic, as the biologist opened up a science of histology.

In conducting the following inquiry, as to the curriculum, then, three points will be considered. The manner in which the student obtains the "principal notions" of medicine from the books, clinical instruction and dissecting, and laboratory work. The curriculum of the schools having a graded course will be used as best adapted to the purpose in hand.

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TEXT-BOOK WORK.

Beyond the ability to read the printed page, which may in a measure be a mere mechanical operation, certain intellectual attributes are requisite for getting the principal notions out of the books. In the first place (presupposing a logical arrangement of the text-book) it is highly advantageous for the student to have attained an intellectual maturity sufficient to enable him to understand the system on which the text-book writer has arranged his matter, and, in the second place, the mental alertness to recognize the parts of the arrangement and their relations as they are filled in, so that what is material may be given the study due to its importance and the lesser matters be noted as such. Perhaps not less important in this process of getting the ideas of an author out of his book and into one's own head is a cultivated perception of the meaning of phrases and sufficient continuity of thought to carry a term, or phrase, or sentence in the mind until the idea it contains as an isolated part of the discourse has been reduced to its proper value by the modifying phrases or sentences which generally accompany the principal part of a sentence or of a paragraph.

Thus we see why in some quarters so much stress is laid on a thorough literary education as a preparation for the study of medicine. Even during the eighth decade of this century, when the theoretical or literary science of the class and lecture room had reached its maximum and was soon to begin to give way to laboratory instruction, the well known German evolutionist, Prof. Ernst Haeckel, could say from his own experience that "in comparing graduates of classical colleges (Gymnasien) and those of scientific colleges (Realgymnasien), I have always observed an intellectual superiority in the former, despite their defective knowledge, and have even found during the teaching of my own specialty, zoölogy, that the former enter more easily into the higher and more general problems of science than the latter. I am, therefore," he continues, "against the admission of Realschul graduates to the medical schools (faculties), and I base this conclusion on my own experience."[1]

But since the distinguished professor wrote these words a new class of medical schools has arisen in America. At the beginning of the decade there were three or four courses of study whose object was to prepare the student for the study of medicine. The course covered two years, and was chemical and biological in character. At Cornell the student intending to pursue a preparatory medical course was advised to secure a degree in letters or science; at Johns Hopkins the course led to the bachelor's degree (A. B.). To-day we find three or four times as many such courses, as will be shown later on. In the mean time let us examine into the manner in which the student (much the larger number) who has neither the experience of the preparatory school, or the ability to collect, digest, and formulate his knowledge given by higher literary education, is instructed by the American medical colleges.

Until comparatively recently the method of didactic (*i. e.*, nonclinic) instruction, called repetitional, held almost undivided sway. The essence of this system of instruction is the well-known pedagogical—that is to say psychological—fact that repetition and attention are the most important elements in the acquisition of knowledge. The application of this not very obscure principle of pedagogy to medical instruction was made this way: There were so many "didactic" professors in the school. Each of these gave the same course of lectures every year. The student listened to them during his first year and again during his second year, and had he attended a third year he would have heard them for a third time. This system has been severely criticised during the ten years past. It has, especially of late, been rapidly giving place to the graded or progressive course, which can not be finished in a single year by a well-prepared, intelligent, and laborious student, as at a celebrated southern university. But it is instructive to hear what may be said for the repetition principle by a department of a large university of the northwest, which sought to retain the

[1] To the same effect Dr. Zarncke, professor of modern languages and literature, when dean of the faculty of philosophy of the University of Leipzig, says: "There is a second view, which I call the pedagogic view. There is no better means of training the mind than the thinking and observing that the study of the classic languages necessitates. There is something mysterious in this result, and still an experience of many years has confirmed it. I am a member of two examining boards, one of which examines young men who have received their training in a gymnasium on a classical basis, while the other young men are without this foundation. The latter are very often superior to the former in information (Kenntnissen), but when mental maturity is tested by written work the graduates of the gymnasium surpass those of other schools to such a degree that a comparison can scarcely be instituted."

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repetition feature in conjunction with a progressive course of three years. This defense is as follows:

"The course of instruction consists of three collegiate years of nine months each. The work of the course is systematically arranged, and so graded that the more elementary branches and the practical courses are first taken by the student, while the more advanced courses and theoretical subjects are presented later in the course, so as to secure, as far as practicable, an orderly succession of studies; while the more fundamental subjects are presented a second time during the course, so as to secure a more perfect comprehension of their principles and relations, and to fix the facts more firmly in the mind. The hours of the required lectures are so arranged that but few are given at the same time, and every facility is afforded for students to attend the repetition of the principal lectures as often as may be thought profitable. The faculty recognize, what is evident in the experience of all medical students, that attendance upon lectures on the same subject a second time, after other related branches have been studied, is much more interesting and profitable than the first; and hence they require students to attend lectures on all the leading subjects more than once."

In the catalogue giving the reorganized course of four years, however, nothing is said of the repetitional features.

But more particularly to facilitate the comprehension of the text-book matter and impress the principal notions which it contains, two methods have been adopted in America in addition to the "didactic" lecture. These are the recitation and the "quiz," neither of which are employed in the schools of university grade in Europe. Indeed, in America the lecture system may be said to be gradually becoming complementary to the text-book, just as in Europe the seminarium or conference is becoming supplementary to a course of lectures. Thus we are informed by the Yale Medical School that "in reorganizing the school as an integral part of Yale University in 1884, the inherent defects in the older and still common method of instructing chiefly by didactic lectures were recognized and the methods now employed are similar to those in vogue in the other departments of the university. Didactic lectures are still employed as best in some branches, but *recitations* from assigned readings, with explanatory lectures, laboratory work, and personal instruction in the clinics constitute the main portion of the curriculum." At the Albany Medical College it is believed that instruction by recitation is as essential in medical as in literary colleges, and the faculty have greatly enlarged and extended this department of the teaching in this college. The recitations, which have hitherto been held during unoccupied hours in the evening, are now made part of the regular curriculum. Every study taught in the college by lectures is also made the subject of recitations, the ratio of the number of lectures to that of recitations being in general two to one.

The Long Island College Hospital, having the old system of lecture courses, has adopted a reading and recitation term, which begins at the close of the regular term and continues until June. It is designed to thoroughly prepare the student for attendance on the lectures of the ensuing regular term. Clinical instruction for advanced students is continued during the reading and recitation term. As the laws of the State of New York require three years' study of medicine, students are advised to commence their study at the beginning of the reading and recitation term.

The daily and weekly quiz appears to be but a modification of the examination at the end of the year or term without the breadth or formality of that ancient contrivance for testing the memory of the student or his ability to grasp the idea expressed by the words in the examination paper before him. At the University of Virginia it has been found that "the daily oral examinations on the subject of the previous lecture are of great value in stimulating the student to regular and systematic habits of study, and furnishing the professor an opportunity of discovering and removing the difficulties met with by the student."

At the Medical College of Alabama still stronger language is used in favor of these daily oral examinations, and it announces that "so important is this method of impressing the leading facts considered in the lecture hour, and so useful is this method of instruction in obtaining systematic and accurate information considered, that members of the faculty will, after the middle portion of the term is reached, establish a daily quiz, which will be so arranged as not to interfere with any lecture or other duty, and will be of great interest, especially to those who contemplate applying for graduation."

As medicine principally deals with diseased conditions of the human body in an effort to restore it to health, it is not difficult to illustrate the lecture on anatomy, physiology, surgery, and even the practice of medicine by demonstrations,

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specimens, models, and charts, and in this way even the "didactic" lecture has a semblance to the clinic. Without dwelling further on the subject of the didactic lecture, we now pass to the clinic, which must be treated with equal brevity.

PRACTICAL WORK.

In his Life of Macaulay, Trevelyan gives an extract from his uncle's diary in which the historian gives the argument by which he dissuaded the Prince Consort from attempting to give the English universities a Continental form by introducing a faculty of medicine. Macaulay explained to the Prince the great difficulty there would be in getting distinguished physicians to exchange a princely revenue in London for the salary and retirement of a university professor at Oxford or Cambridge.

But there is another reason of still greater importance for locating a first-class school of medicine in a large city. "The workingman feeds the hospital, and to enable a faculty of medicine to exist a great industrial center is necessary."[1] This sentiment is supported by the testimony of the Harvard Medical School, which says that it was established in Boston in order to secure those advantages for clinical instruction and for the study of practical anatomy which are found only in large cities.

Practical instruction in medicine may be classed under two heads: There is, first, the nonpathological form, which goes by the name of dissection, and, second, the clinic, which may be subdivided into three forms, in one of which the subject is operated on in the amphitheater before the class; in the second the class, or a portion of it, is taken to the bedside, and in the third the advanced student acts as a physician or as an assistant.

The amount of work required in dissection is not uniform throughout the country and is still less uniformly stated. From 91 schools whose catalogues mention the work in dissection required for graduation, the following information has been obtained:

Work required of student.	No. of schools.	
Dissection of entire body	34	
Dissection of three parts at least	7	
Dissection of two parts at least	6	
Two courses of dissection	10	
One course of dissection	3	
Must dissect during two sessions (or courses)	4	
Must dissect during one session	1	
		65
Studied practical anatomy during two sessions	11	
Pursued one course of practical anatomy	5	
		16
Must attend dissections while in school	2	
Must attend clinical lectures and dissections	1	
Must present certificate that necessary dissections have been made	1	
Must produce evidence of attendance in practical anatomy	2	
Must produce evidence of having been adequately engaged in study of practical anatomy	1	
Must produce evidence of having pursued the course of practical anatomy	1	
Must spend required time in practical anatomy	1	
A satisfactory course in practical anatomy	1	
		10

The modification of the didactic lecture by the previously "assigned reading" by the Yale Medical School has been noted; it would appear that the method in vogue there for studying the framework of the human body is no less complete and systematic. This system of instruction in anatomy is as follows:

"As in the other fundamental branches of medicine, the instruction in anatomy is chiefly by means of recitations and laboratory work. The course extends through two years, with examinations at the end of each year. At the beginning of the course each student is provided with a box containing all parts of the skeleton for home study, and during the first term two weekly laboratory lectures are given on osteology and syndesmology, alternating with recitations from the text-book. After a thorough knowledge of the bones, ligaments, and muscular attachments has been obtained, the student enters upon laboratory work on the soft parts, in which eight hours weekly are required until the dissection of all parts of the body has been made. Preparations of the different

[1] Le Fort, at the meeting of the Parisian group of the Society for Higher Instruction in France.

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parts are made, showing muscles, arteries, and nerves, satisfactory demonstrations of which must be given before the professor at their completion. Preliminary to the dissection of the human body, a brief laboratory course is pursued in the anatomy of the cat. All laboratory work is under the immediate instruction of the professor. The written examination at the close of the year is upon osteology, syndesmology, and the trunk viscera. The instruction the second year is by alternating lectures and recitations, and includes the remainder of systematic anatomy, with topographical and superficial anatomy, illustrated by preparations, models, and several hundred lantern slides."

At the University of Virginia the course in dissection appears to be carried out with equal thoroughness. "For the course in practical anatomy, dissecting material, obtained under the permissive law of the State, is abundantly supplied without cost to the student. Each medical student, however many sessions he may have attended, is required to dissect under the constant and careful supervision of the demonstrator. Attendance in the dissecting room is compulsory, a strict record being kept in the case of each student. Besides the oral examination which precedes each lecture, and the other examinations, each student is required to stand seven practical examinations, one upon osteology, four upon different parts of the muscular system, one on the viscera, and one on the vessels and nerves. These examinations are oral and private, each student being examined alone. They consist of the identification of the truths of anatomy on the bones, the cadaver, and the dissected cadaver, and are thus a perfect test of the student's acquaintance with the gross structure of the human body."

As the attendance at neither of these schools is large as compared with the attendance at the schools of Philadelphia, New York, and Chicago, the following course of dissection may more nearly represent what the great schools can do and the average school does do.

During each session every student of the first and second classes will be required to dissect all regions of the human body. The first dissection of a region will be mainly of the nature of a preliminary study, the student being required to examine the attachments and relations of muscles and the general course and situation of the great vascular and nervous trunks. The second dissection of a region will be as exhaustive as it is practicable to make it, all the structures being as completely displayed as the time at the disposal of the student will allow. The demonstrator of anatomy will examine the students from time to time during the progress of their dissections, and, if he finds that they have not properly displayed the structures or have no accurate knowledge of the parts dissected, he will require a new dissection of the same region upon another subject. He will certify to the professor of anatomy the satisfactory completion of each dissection. It is recommended to students of the third class that they perform upon the cadaver such surgical operations as may be practicable, such as ligations of arteries, amputations, etc. Material for this purpose will be furnished. Dissecting will commence October 15 and continue until the following March. The room will be open daily for students and the demonstrator or his assistants will be present. During the session there will be given special demonstrations of the brain, of the thoracic and the abdominal viscera, and also of other difficult or obscure regions of the body. The demonstrator and assistants will have general supervision and direction over all students while in the dissecting room.

In two schools with very large attendance a rather novel course is pursued in aiding the student in his study of osteology. Instead of providing him with a complete skeleton, as at Yale, individual bones are loaned the student, as books are loaned at libraries. At the Columbia College school this "new and useful feature" is transacted in the "bone-room," where a large number of disarticulated skeletons are kept under an ostelogian, it is presumed. In the other school, the celebrated medical school of the University of Pennsylvania, the "bone-room" is dignified by the technical term Osteo-syndesmological Laboratory.

Upon the question of clinical instruction the medical fraternity agree: Clinical instruction is necessary to fit the student for the practice of his profession. Following out this conclusion, a class of hospitals has arisen which in the strictest sense are clinical. In some cases hospitals have been attached, as it were, to a college, as in the case of the medical department of the Tulane University of Louisiana and the School of Medicine of the University of Maryland. In others the hospital has founded a school, as in the case of the Bellevue Hospital Medical College and the Woman's Medical College of the New York Infirmary, and in others the school has founded a hospital, as in the case of the University of Pennsylvania, of Michigan, and of Wooster; of the Jefferson Medical College and Medico Chirurgical College, both of Philadelphia; the Long Island College

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Hospital, and of the homeopathic medical colleges and hospitals of New York and Philadelphia. As a general introduction to the programmes of clinical instruction which follow, the opinion held by the faculty of the Tulane University medical department will be used as expressing the views of every reputable school.

"It is universally admitted that, without abundant anatomical and clinical material, no medical school, however numerous or eloquent its professors, can possibly fit its pupils for practical professional life. It is scarcely necessary to state that it is only in large cities that such advantages can be procured; but it is of paramount importance that the opportunities there afforded should be properly utilized; that the students should be required, under the direction of the teacher, to examine patients for themselves, to keep record of cases, to note daily changes which may occur, and thus acquaint themselves by personal observation with the progress and termination of diseases and accidents. The mere introduction of a patient into an amphitheater and the discussion of his case by the professor in the presence of a large class are no substitute for bedside instruction, and no reduction of lecture fees, not even their entire abolition, can possibly compensate for the lack of such opportunities."

In the medical department of the University of the City of New York, a very largely attended school, the graduating class is divided into sections of about twenty-five each, which receive separate instruction for one or two hours daily throughout the term. This instruction is under the immediate direction and management of nine professors and is carried on partly in the wards of Bellevue Hospital and partly in the college building. The students receive practical instruction in operative surgery upon the cadaver, in the examination of medical and surgical cases for the purpose of diagnosis, in the application of dressings and apparatus, and in the use of the laryngoscope and ophthalmoscope. In the hospital, students are taken to the bedside of the patient and are exercised in making diagnosis under the direction of the instructor, and in dressing wounds, and are enabled to watch the progress of cases. In the dispensary they have similar opportunities to become familiar with the methods of diagnosis, the treatment, and the course of those diseases which do not require confinement in bed. "The success of this system of instruction," says the faculty, "has been very marked in the past, and it has given much satisfaction to both students and teachers; it enables the students to become practically familiar with many of the things which they have learned from their text-books or in the lecture room, to cultivate their powers of observation, and to aid their memory. The importance which the faculty attaches to it is shown in the fact that it involves an increase in the time given to instruction of more than twenty hours each week."

To the same effect the School of Medicine of Columbia College speaks of the recent founding of the Vanderbilt Clinic and Sloane Maternity Hospital, as branches of the school, as being especially beneficial in enabling the school to organize a system of practical clinical teaching, whereby each member of numerous small classes may be brought into direct personal contact with the cases under examination. This teaching takes the following form under the title of "Practical Clinical Instruction:"

General medicine.—Diagnosis, including so-called physical diagnosis, and treatment.
General surgery.—Diagnosis and treatment, including minor surgery, bandaging, and the application of antiseptic dressings.
Midwifery.—Attendance upon cases of labor at the Sloane Maternity Hospital by advanced students, under the direction of the obstetricians of the hospital.
Gynecology.—Practical instruction in diagnosis and treatment, including the use of instruments.
Diseases of children.—Diagnosis and treatment.
Diseases of the genito-urinary organs.—Diagnosis and treatment.
Diseases of the nervous system.—Examination of cases, including electrical tests; diagnosis and localization of lesions; electro-therapeutics.
Diseases of the skin.—Diagnosis and treatment.
Diseases of the eye.—Diagnosis, including the tests for errors of refraction and accommodation, and the use of the ophthalmoscope, and treatment.
Diseases of the ear.—Diagnosis and treatment.
Diseas s of the throat.—Diagnosis and treatment, including the use of the laryngoscope and rhinoscope.

At the Yale Medical School the instruction is given in the New Haven Hospital and at the college dispensary.

"In the medical clinics at the dispensary the preliminary examination is made by a student, and this is reviewed and extended as far as necessary by the instructor; the latter explains the relations of the symptoms, makes the diagnosis, and gives the student in charge general directions for treatment; the student, subject to correction, gives the precise directions to the patient. All symptoms

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and physical signs are demonstrated to all the members of the class, and examinations of urine, sputum, gastric contents, and blood are made, when called for, by the student, under the supervision of the instructors. It is the especial aim in these clinics to familiarize the student with all methods and instruments of diagnostic examination, and the instruction is made as personal as possible. Cases which need to seen at home are put in charge of the senior students, and obstetrical cases are assigned to them. In such cases the professor of clinical medicine or his assistants give counsel whenever called on. At the hospital one medical clinic is held each week; these are general medical clinics, but particular attention is given to the demonstration of the various signs of importance in physical diagnosis. Opportunity is also here provided for the study of those severer cases which the dispensary service does not furnish, and care is taken to have the students see the same patient in various stages of his disease, and, in fatal cases, to demonstrate the lesions."

The "clinical out-practice," referred to in the above quotation, illustrates the usage of other schools. At the Jefferson Medical College the professor of practice will, during his clinical term, devote a number of hours to clinical conferences. During these the advanced student will have a case assigned him, which he will be required, with the aid of the chief clinical assistant, to examine beforehand, and which then, with remarks on the diagnosis, prognosis, and treatment, he will present to the class. The Bennett Medical School, of Chicago, goes further. Students in the senior year, by assignment, will be given the care of out-patients from the clinic, thus giving the experience in actual bedside practice, in such cases as fevers, rheumatism, treatment after surgical operations, obstetrical cases, etc.

But it is in the dispensary that this "out" instruction is most frequently given. At the Chicago Medical School of the Northwestern University, for instance, the members of the clinical class may serve as assistants to the physicians and surgeons of the several departments of the dispensary, and to the pharmacist of the dispensary, and receive certificates of such service. Members of the attending staff and the dispensary pharmacist appoint their own assistants, and the term of service is six weeks. At the Kansas City Medical College every member of the senior class served a period of two months in each of the departments of the dispensary during the sessions of 1889–'90.

To illustrate the order of clinical exercises, the following programmes are given:

Roster of hospital practice and laboratories for the third-year students of the Jefferson Medical College.

SESSION OF 1891-92.

[The class is divided into eleven sections, A to K, inclusive, serving as follows, in periods of two weeks each, the dates being included.]

Clinics, etc.	Oct. 12 to 24, inclusive.	Oct. 26 to Nov. 7.	Nov. 9 to 21.	Nov. 23 to Dec. 5.	Dec. 7 to 19.	Jan. 4 to 16.	Jan. 18 to 30.	Feb. 1 to 13.	Feb. 15 to 27.	Feb. 29 to Mar. 12.	Mar. 14 to 26.
Medical	A	B	C	D	E	F	G	H	I	J	K
Surgical	B	C	D	E	F	G	H	I	J	K	A
Gynæcological	C	D	E	F	G	H	I	J	K	A	B
Ophthalmic	D	E	F	G	H	I	J	K	A	B	C
Orthopædic	E	F	G	H	I	J	K	A	B	C	D
Dermatological	F	G	H	I	J	K	A	B	C	D	E
Children's	G	H	I	J	K	A	B	C	D	E	F
Neurology	H	I	J	K	A	B	C	D	E	F	G
Physical diagnosis	J K	J K	A B	A B	C D	C D	E F	E F	G H	G H I	I
Clinical obstetrics	A	B	C	D	E	F	G	H	I	J	K
Throat and nose	A	B	C	D	E	F	G	H	I	J	K
Dr. Hearn	B	C	D	E	F	G	H	I	J	K	A
Dr. Henry or Dr. Davis	C	D	E	F	G	H	I	J	K	A	B
Dr. S. Solis Cohen	D	E	F	G	H	I	J	K	A	B	C
Pathological laboratory	J K	J K	A B	A B	C D	C D	E F	E F	G H	G H I	I
Practical obstetrics	G H	G H	I J	I J	K A	K A	B C	B C	D E	D E F	F
Operative surgery	A B	A B	C D	C D	E F	E F	G H	G H	I J	I J K	K

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Bellevue Hospital Medical College.

ORDER OF LECTURES—REGULAR SESSION, 1890-1891.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
10	.....	Surgical clinic, until Jan. 1; Medical clinic, after Jan. 1.	Section teaching, Bellevue Hospital. Histology, etc., Carnegie Laboratory, from 10 to 12.	Gynecological clinic, Prof. Lusk.	.....	.....
2	Eye clinic....	Medical clinic, Sept., Oct., Nov., Dec.; children's clinic after Jan. 1.	Surgical clinic until Jan. 1; mental diseases, after Jan. 1.	Medical clinic.	Medical clinic.	Surgical clinic at N.

SPRING SESSION, 1891.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
11	Juniors, microscopical examination of urine at 10.	.....	.....	Genito-urinary clinic.	.....
2	.....	Clinic, diseases of children.	Surgical clinic, until May 1; after May 1.	Gynecological clinic.	Medical clinic and exercises in diagnosis.
3	.....	Demonstrations in gross pathology, Dr. Biggs.	.....	Clinic, diseases of the throat, after May 1.	.....
4	Demonstrations of surgical dressings, Dr. Silver.	Demonstrations in anatomy, dissecting room.	Demonstrations in anatomy, dissecting room.	Demonstrations in anatomy, dissecting room.	Demonstrations in anatomy, dissecting room.

Schedule of hospital and college clinics for students of second and third years of the Chicago Medical College of the Northwestern University.

MERCY HOSPITAL.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 to 10	Medical	.....	Gynecology	.....	Medical	.....
2 to 3 / 3 to 4	.....	Surgical	Oral surgery	Eye and ear.	.....	.....

ST. LUKE'S HOSPITAL.

1.30 to 2.30	.....	.....	Eye and ear.	Oral surgery	.....	.....
2 to 3	Autopsies	.....	Gynecological.	Surgery	.....	.....
3 to 4	Medical	.....				

COLLEGE CLINICS.

2 to 3	Surgical	Dermatology	Diseases of children.	Gynecology.	Eye and ear.	Laryngology, rhinology.
2 to 4	.....	.....	.....	.....	Medical	.....
4 to 5	.....	.....	.....	.....	.....	Nervous diseases.

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Schedule of hospital and college clinics for students of second and third years of the Chicago Medical College of the Northwestern University—Continued.

DISPENSARY CLINICS.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
2 to 3	Medical. Surgical. Throat and chest. Gynecological. Eye and ear. Diseases of children.	Medical. Surgical. Throat and chest. Gynecological. Eye and ear. Diseases of children. Nervous diseases.	Medical. Surgical. Throat and chest. Gynecological. Eye and ear. Diseases of children.	Medical. Surgical. Throat and chest. Gynecological. Eye and ear. Diseases of children. Nervous diseases.	Medical. Surgical. Throat and chest. Gynecological. Eye and ear. Diseases of children.	Medical. Surgical. Throat and chest. Gynecological. Eye and ear. Diseases of children. Nervous diseases. Skin diseases.

Hospital and dispensary clinics of the medical department of the University of California.

Hours.	Tuesday.	Thursday.	Saturday.
9 a. m.	Clinical medicine	Clinical medicine	Clinical medicine.
	Examination of the patient by student, etc.		
11 a. m.	Clinical surgery	Clinical surgery	Clinical surgery.
	Especial attention is given, in a ward devoted to the purpose, to the conduct of disorders of the genito-urinary organs and venereal diseases.		
		Operative gynecology and practical obstetrics.	
4 p. m.	Dispensary clinic	Dispensary clinic	
	Eye and ear clinic twice a week.		
	Autopsy three times a week.		

College and hospital clinics of the Kentucky School of Medicine at Louisville.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8 to 9 a. m.	Venereal and skin diseases.	Diseases of rectum.	Diseases of women.	Medical clinic.	Medical clinic.	Diseases of children.
2 to 3 p. m.			Hospital clinic in afternoon.		Hospital clinic in afternoon.	Diseases eye, ear, and throat.
4 to 5 p. m.	Surgical clinic.			Surgical clinic.		Surgical clinic.

The clinics of the New York Homeopathic Medical College and Hospital.

Monday	Therapeutics.
Tuesday	Dermatology, Physical diagnosis.
Wednesday	Surgery, Ophthalmology.
Thursday	Heart and lungs, Otology, Nervous diseases.
Saturday	Genito-urinary, General medicine, Gynecology, Outdoor children's department, Outdoor obstetrical department.

LABORATORY WORK.

The most noteworthy innovation of the decade has not been the lengthening of the course of instruction, many years ago recognized as too short, not the better and completer organization of the clinic, which in a great part no longer renders the "study under a physician" indispensable, but the introduction of laboratory work in chemistry, physiology, and especially in normal and pathological histology or, more generally, biology. Perhaps the introduction of laboratory work has played a great part in lengthening the course of medical instruc-

tion, as it certainly has given it status as a course in science. It is certainly so in the case of the Medical School of the University of Michigan, for its faculty states explicitly that the extension of the course from three to four years "is largely due to the need for the more through instruction in laboratory work," for the student who spends but "three years in attendance upon lectures and one year of study with a preceptor can not reap the advantage of the full course of laboratory instruction."[1]

Laboratory instruction as given in the American colleges of medicine may, in view of the laboratories in which it is given, be classed under six heads, to wit:

1. Dissection or "Practical Anatomy."
2. Chemical manipulation (general and analytic).
3. Physiological.
4. Histological.
   a. Normal.
   b. Pathological.
5. Bacteriological.
6. Materia medica.

Dissection has already been spoken of; normal histology will be spoken of further on; while other than noting that it affords each student the opportunity to go through a course of chemical experiments, the instruction of the chemical laboratory calls for no special mention except as to that form which at the Yale Medical School is called the course in physiological and medical chemistry.

This course consists of recitations and a practical laboratory study of the composition and reactions of the various animal tissues and fluids, the processes of metabolism and digestion, and the action of ferments. Due attention is paid to the composition of foods, the physiological use of the digestive preparations, and other matters of medical interest, especially to the recent analytical methods employed in clinical work. The study of normal urine is supplemented by abundant practice in the chemical and microscopical examination of pathological specimens. At the Jefferson Medical College, the same tendency towards the pathological side is shown in the instruction in its laboratory of practical chemistry. The student there examines the normal and abnormal products of the human body as aiding diagnosis, and studies practically the "morbid chemistry of the bile and blood" and the most approved methods of examining urine. At the University of Michigan there are two courses, one in qualitative chemistry and the other in urinalysis as applied to chemical uses and physiological study; but, in addition to them and at the option of the student, two other courses are offered, one in physiological chemistry and the other in pathological chemistry. The first of these optional courses deals with the analysis of the solid and fluid parts of the body, the other embraces courses in qualitative and quantitative analysis and the examination of foods and of the tissues and fluids of poisoned animals. One might venture to call this specialization of chemistry diagnostic chemistry. Toxocologic chemistry also appears as a department of the chemical laboratory, but sometimes is connected with medical jurisprodence.

The physiological laboratory, of which there are very few in the country, is to the medical school what the mechanical or testing laboratory is to the college of technology, and in some schools (which care to mention the fact) what the biological laboratory is to the vivisectionist. The instruments with which such a laboratory is fitted up and the use made of them may be illustrated by the laboratory of the Jefferson Medical College. The teaching of this college in its course of experimental physiology embraces the demonstration of the essential phenomena of digestion, absorption, circulation, respiration, excretion, the functions of the nervous system, including the special senses, the reproductive apparatus, and development of the embryo. For these demonstrations, as well as for original research, the laboratory is equipped with the following apparatus. For the study of—

Digestion and absorption.—Chemical appliances for the investigation of the properties of the albuminous bodies, the chemistry of the tissues, the composition of the digestive fluids, blood, etc., instruments for making gastric and intestinal fistulæ, water baths, and dialysers, and apparatus for recording rate of secretion.

[1] This school, with great propriety, classes dissections as laboratory work. Other schools, seemingly with less propriety, also class the witnessing an autopsy as laboratory work, considering it as a part of the work of the pathological laboratory. It would be scarcely permissible to call a "didactic" lecture on chemistry, illustrated by experiments, a laboratory exercise. In both the autopsy and the chemical lecture the student is a spectator and listener, not an active agent. At Harvard, however, and at the Bellevue College, the student is called upon by turns to make an autopsy.

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Circulation.—Czermack's holders; kymographion clockwork motor; Foucault's regulator and three recording cylinders, including those for continuous traces; mercurial manometers; Bernard's differential manometers; Brindley's and Sanderson's cardiographs, cardiophone with telephonic attachment, Haldat's and other apparatus for demonstrating hydrostatic phenomena; Marey's simple cardiograph and sphygmograph with Sanderson's modification; Marey's apparatus of rigid, elastic, and vertical tube; arterial schema; Hawksley's vascular schema; Majendie's cardiometer; Fick's spring kymograph; Marey's cardiac clamp; Coat's apparatus with Brubaker's modification; Franck's double myograph; Marey's cardiac sounds for horse, apparatus for retardation of pulse, cardiograph for small animals, Ludwig's stromuhr, and apparatus for studying capillary circulation, the warm and electrical stages, gas chambers, Gower's apparatus for counting blood corpuscles, also a hæmoglobinometer.

Respiration.—The Pettenkofer-Voit respiration apparatus; Regnault and Reiset's respiration apparatus; Ludwig's respiration apparatus; Valentin's respiration apparatus; Hutchinson's spirometer; recording stethometer; Marey's pneumograph; Bamberger's apparatus; Rosenthal's apparatus with Brubaker's modification; aërotonometer; Gréhant-Alverguiat gas pump; apparatus for artificial respiration, with water motor; anemometer scales turning the beam at the $\frac{1}{10}$ of a grain, and standard barometer; Calliburce's instrument for vibratile cilia.

Calorimetry.—Thomson's and D'Arsonval's calorimeters; thermometers, etc.

Secretion.—Roy's kidney onkometer and onkograph. Apparatus for determining rate and amount of urea.

Nervous system.—Du Bois-Reymond's indication apparatus with Helmholtz's modification; spring myograph; muscle telegraph, nonpolarizable electrodes, diverting chambers, key, rheocord, round compensator, resistance box, whippe; commutator; moist chambers; Wiedemann's galvanometer, including telescope and scale; Thomson's Elliott galvanometer, including shunt, scale, lamp, etc.; Bunsen and Daniel batteries; Page's vibrator; metronome; chronograph; tuning forks, marking keys; Bernstein's differential herotome; Helmholtz's electro-magnetic rotator and myophone with telephonic attachments and pendulum myograph; Pflüger's myograph; Gréhant's chariot with clockwork motor; Brubaker's apparatus for electrotonus; apparatus for reflex movements, and Ludwig's section-cutter for spinal cord.

Vision, voice, and hearing.—Models of eye; Kuhne's artificial eye; Helmholtz's ophthalmometer; models of larnyx and ear; acoustical apparatus, including air pump and bell; Helmholtz's siren; acoustic bellows; sonometer; rods, membranes, plates, pipes, resonators, oboe vox humana; Koeing's manometric apparatus.

Embryology.—An incubator, capable of holding one hundred eggs for the study of development, and numerous microscopic sections.

Comparative physiology.—This collection, embracing several hundred specimens, many of which are extremely rare, illustrates the comparative physiology of the teeth, stomach, etc., of the circulatory, respiratory and genito-urinary organs, of the nervous system, and of the successive stages in the development of the human embryo. The collection is used in supplementing the experimental demonstrations.

Arrangements have been made through which the laboratory can be also supplied from time to time, as required, with living fresh-water and marine objects for biological study, as well as ample material for dissection.

The physiological and histological department has been especially arranged with reference to the wants of the members of the attending class, the laboratory demonstrations constituting a part of the regular instruction during the winter session.

At the Loomis laboratory of the University of the City of New York, in addition to the recording and other instruments used by physiologists, the laboratory contains a large tank for administering to animals air or oxygen, compressed under many atmospheres of pressure; an air pump for experiments upon animals with rarefied air; hot-air chambers for the study of the effects of external heat on body temperature; large automatic models of the heart and spinal cord and of the mechanism of gland secretion, urine secretion, and micturition.

At the University of Michigan medical school the subjects commonly embraced in the practical course relate to the physiology of the special senses, muscular contraction, nerve, reflex action, circulation, and respiration. A smaller room is devoted to advanced work and original investigation. Conveniently situated are an apparatus room, a dark chamber for optical experiments, an incubation closet, and a large workshop containing machinists' and carpenters' appliances.

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The instruction in physiology given by several schools is by means of a course in vivisection or lectures illustrated by vivisection.

The laboratory instruction (excluding dissection as such) the most generally introduced is in histology. Although there is a tendency on one side to class the work in medical chemistry and other laboratory work under the general head of microscopy, as, for instance, at the Tulane University school, where there has been since 1889 a "microscopical laboratory for the better study of normal and morbid anatomy and bacteriology," there is also a tendency to group these subjects under the head of histology. Thus, at the University of Pennsylvania school, "each student of the second year is provided with a separate table and microscope and receives personal instruction in pathological histology, in micology, and in the microscopy of urine," in the "pathological laboratory." A term frequently used is histological and pathological laboratory or histology and pathological anatomy, in which the term histology appears to indicate the microscopic anatomical study of undiseased matter, and the term pathological anatomy the microscopic study of diseased parts.

The laboratory work in histology consists of two parts: One, the preparation (cutting, staining, and mounting) of the specimens and the manipulation of the microscope, the other the study of the import of the specimens. At the University of California school the second process is thought to be attained by the mere mechanical work of the first, "which illustrates and fixes in the mind of the student" the general principles of normal growth and development and the operation of pathological laws. At the Columbia College school the course of mounting, etc., teaches the "methods" not only of preparing, but of studying normal and diseased tissues, and furnishes the student specimens from which he prepares a series of outline sketches.

On the other hand, at the Northwestern University school, students of the first year work two hours a week in cutting, staining, and mounting normal histological sections. Material for this course is furnished in abundance and each student secures a full series of normal histological slides. Free-hand drawing of a large number of the sections mounted in this course is compulsory. Students of the second year devote two hours each week to the study of mounted sections of pathological tissue already cut and stained for them. Free-hand drawings of the sections is compulsory, and the quality of a student's work in this course is considered in his grading in the department of pathology. In the four years' course the work in the microscopical laboratories will be more extensive. All of the work in the microscopical laboratory is done in the presence and under the supervision of the demonstrators of the respective departments. Students are required to furnish their own slides, cover glasses, mounting needles, and spatulæ.

At the Yale medical school histology is treated from the embryological standpoint. By this method the student is enabled to gain not only a thorough understanding of the structure of the various tissues and organs of the body, but also to trace their development and growth. The course of instruction consists of lectures, recitations, and laboratory work. The lectures are very fully illustrated by lantern transparencies made from photographs of typical sections and drawings. These are accompanied by recitations from a standard text-book. In the laboratory, each student receives carefully prepared sections and specimens of all the tissues and organs of the body, both in the adult and embryonic condition; these are mounted for permanent preservation and from them careful drawings are made. Practical instruction is given each student in the technology of the subject. The laboratory cabinet contains an extensive reference collection of histological specimens and serial sections of embryos; this, together with the most recent instruments and publications and an abundant supply of material, affords good facilities for advanced work.

The University of Maryland school announces that, with the introduction of the three-years course, a laboratory of normal and pathological histology will be opened and that constantly increasing attention will be devoted to the development of this laboratory work, as the faculty fully recognizes its all-important influence in modern medical education.

The bacteriology course is frequently united with the work in histology, but in perhaps half a dozen cases it has a laboratory of its own. At the University of Michigan school work of this character is done in the laboratory of hygiene. The work is, in an elementary way, on the model of that done in the laboratories of Koch and Pasteur.

The several laboratories of materia medica and experimental medicine may be illustrated by that of the University of the City of New York. This laboratory is provided with a full assortment of the various articles of the materia

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medica to be used in giving the students a practical acquaintance with each drug and its preparation. Classes will be formed to work in the laboratory under supervision, for the purpose of insuring familiarity with the compounding and administration of medicines. In addition to this, practical instruction will be given in the use of remedies which are not medicines. This will include a special course in electrical therapeutics, for which purpose the laboratory has been fully equipped.

Incidentally the programme of laboratory instruction has been given in the programmes of clinical instruction on pages 888 and 910. It is therefore only necessary to give by way of illustration the special rosters of the University of Pennsylvania school.

Roster of laboratory instruction in pathology and instruction in orthopædics, for students of the third year.

I.

For attendance upon these courses, the third year class is divided into four sections, A, B, C, and D, which attend as follows:

First period, from Thursday, October 8, to Friday, November 15, inclusive.

	Monday.	Tuesday.	Thursday.	Friday.
Pathological histology	D	A	B	C
Orthopædics	A B C			

Second period, from Monday, November 18, to Friday, January 10, inclusive.

Pathological histology	C	A	B	D
Orthopædics	A B D			

Third period, from Monday, January 13, to Friday, February 28, inclusive.

Pathological histology	B	A	C	D
Orthopædics	A C D			

Fourth period, from Monday, March 3, to Friday, April 11, inclusive.

Pathological histology	A	B	C	D
Orthopædics	B C D			

The instruction in orthopædics is given at the university hospital at 11 o'clock; in pathology, in the pathological laboratory.

II.

Special roster of laboratory instruction in histology, osteology, and syndesmology for students of the first year, session 1889-90.

For instruction in these laboratories the first-year class is divided into five sections, A, B, C, D, and E, which attend throughout the entire session as follows:

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Histology	A	B	C	D	E	
Osteology	B C D		All.	E and A		

All students not occupied during the above hours dissect from 12 to 2 daily, and from 9 to 11 Friday.

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PREPARATORY MEDICAL SCHOOLS.

The law of 1801 of the French Republic fixed the number of medical schools at six, of which three had been established by the date of 1840. In the meantime there had gradually grown up a lower kind of school for the purpose of initiating students of medicine into the elements of the art of curing disease. During 1820 these schools were placed under the control of the State educational authorities called the "university," and in 1840 they were reorganized by the minister. The eighteen schools whose instruction was thus unified had been founded independently, and on no common principle, and therefore were very diverse in their organization. Some had endowments, some lived on the meager diet of tuition fees, but the most were supported by the city or department, or by grants from the Governmental hospital bureau. In all the amphitheaters dissecting material and chemical advantages were poor or wholly absent. In 1840 a uniform course was given them as follows:

Chemistry and pharmacy; natural medical history (botany) and materia medica; anatomy and physiology; pathology (medical clinic); pathology (surgical clinic); accouchement, and diseases of women and children.

One of the great advantages of these schools, said the minister, is "that they give opportunities for anatomical study, that essential of medical study which can not always be furnished by the higher medical faculties (*i. e.*, schools), where the students are frequently too numerous to follow with profit all the demonstrations." In each school there were to be six professors and two adjunct professors and the cities were required to furnish the necessary anatomical material and the hospitals at least fifty beds for clinical purposes.

In 1854 the American Medical Association had adopted a resolution "cordially approving of the establishment of private schools to meet the increased desire on the part of a respectable number of medical students for a higher grade of professional education than can usually be acquired by 'reading medicine' under the direction of a single instructor." In 1856 Drs. Dana, Robinson, and Fitch, of Portland, opened the Portland Medical School for Preparatory Instruction, Dr. Robinson representing materia medica, midwifery, and diseases of women and children; Dr. Dana, physiology, pathology, and practice; Dr. Fitch, anatomy, surgery, and chemistry. The school was located in the Portland Dispensary and opened with two students. The faculty of the school now consists of 9 professors and three adjunct instructors, and the student is requested to remain at least one year, which constitutes the course. The departments of instruction are four. In the first, systematic recitations are held in anatomy, materia medica and therapeutics, surgery, theory, and practice of medicine, and obstetrics. In the second, familiar lectures and demonstrations are given on the physical exploration of the chest and diseases of the heart and lungs, on minor and operative surgery, on diseases of women, and on physiology. In the third, clinical instruction at the school and various charitable institutions. Cases of midwifery will be furnished to advanced students as far as possible. In the fourth department the study of practical anatomy is a prominent feature of the winter term and during the last weeks of this term the recitations are omitted and the whole attention of the student given to dissections, lectures, and clinical study. No degrees are conferred.

At present fourteen institutions report preparatory courses in medicine; and two, including the Portland school just mentioned, report themselves as wholly engaged in such work. These courses are, with two exceptions, of two years, and it is sometimes indicated, in the remarks which explain why they have been formed, that they are for those who wish to prepare to pursue the study of medicine without spending the time required by a collegiate course. The proposition of the president of Harvard to reduce the four-year curriculum to three years, and the adoption by Columbia College of that period as a college curriculum leading to a degree to be given when the student has pursued the first year's course of the medical or other professional school is seemingly promoting the rapid creation of those preparatory medical courses in our higher institutions of learning. None of these courses by itself leads to a degree, even the four years' "special science course, antecedent to medicine" of the University of Wisconsin does not lead to the bachelor of science degree. Their object is very well, stated by the University of Pennsylvania in the following terms:

"This course preparatory to medicine was established in 1885 for earnest students who can not present the requirements for admission to the regular college courses or are unable to devote four years to the preparatory work, and yet desire some systematic training in scientific and liberal studies. The results have already shown conclusively that such a course was greatly needed and that the men who have faithfully pursued the work have excelled in their subsequent professional studies."

The course of the University of Pennsylvania, given below, is, generally speaking, the type of those of the Northwestern, Wake Forest, and Wisconsin universities. At the Northwestern University, however, mathematics takes the place of history in the first year, and logic, psychology, and physics the place of physiology and botany in the second. Mathematics, psychology, and physics also appear in the course of the Wisconsin University, while "rhetorical work and military drill are required as of other students." The course at Cornell University agrees with the type in having French or German, and with the Northwestern University in having logic and psychology. Closely related to the Pennsylvania type is another furnished by three elective courses, each of two years, which are prefaced by one or two years of collegiate study, the entire course of three or four years being capped with the degree of bachelor of science. The institutions at which these courses obtain are the Johns Hopkins University, the John C. Green School of Science (Princeton College), and the Sheffield Scientific School (Yale University). They are in reality academic courses in biology, for they are of sufficient completeness to be rewarded with a degree, and are by no means preparatory to the study of medicine in the sense that the first year of a graded course of a medical school is preparatory to the study of the second year. Were this distinction not a true one every academic course in biology might be classed as a medical preparatory course, which is not the pedagogical function of biology as a collegiate study. This type, therefore, is not represented in the curricula that follow.[1]

Truer preparatory courses are those offered by the University of Virginia and others. In one of these, that of the University of West Virginia, the instruction is given in a "school of biology," it must be admitted; but it is stated that "practical anatomy" is required of those who intend to *study medicine;* while the others study general anatomy only. The question of priority of establishment is always a dangerous one to discuss; but as it appears that the University of North Carolina was the first to inaugurate a course of this kind, its course, were it not of a single year, would be used to illustrate the type of curriculum now under discussion, instead of that of the University of Virginia. The course of the latter institution was established for the following reasons:

"Graduation in medicine, as in the other departments of the University of Virginia, does not depend upon the time which has been spent in the study of medicine, but upon the preparation of the student as indicated by rigid written examinations which he is required to pass. It is possible, therefore, for a well-prepared and laborious student to graduate in one session, and examples are not wanting where such graduates have attained conspicuous success in professional life. But the severe and protracted labor necessary for this purpose is attended with evils of which the medical faculty is fully conscious. And while the regular course is complete as far as professional studies are concerned, it leaves the student without the benefit of certain scientific studies, which furnish an admirable preparation for and enlargement of the strictly professional course. Students are therefore advised to devote two sessions to the work; and for the benefit of those who can afford the time to pursue them, special courses in biology and physics have been arranged with particular regard to the training needed for medical studies."

From an examination of the curriculum given below it will be seen that the repetitional feature is strongly emphasized.

Now what value do the medical schools of the country place upon these various kinds of preparatory courses? In the case of the course at Princeton College the faculty of the Medical School of Columbia College will accept it as equal to six months study under a preceptor in case the student attends three sessions at that medical college, while the Chicago College of Physicians and Surgeons, Rush Medical College, and the Chicago Medical College "have approved the four years' course [of the University of Wisconsin], and will accept it as the equivalent of one year's study." The course of the Portland Preparatory School is to supply the place of the preceptor not of the medical college, and what the introductory courses of the Universities of Virginia and Pennsylvania are intended to do has already been very fully explained in the words of their own competent faculties.

[1] It will be noticed that the department of biology of the Illinois State University (p. 1013) has a special course preparatory to medicine.

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Course preparatory to medicine in the University of Pennsylvania.

FIRST YEAR.

First term.	*Second term.*
English, three hours a week.	English, three hours a week.
History, two hours.	History, two hours.
Latin, French, or German, four hours.	Latin, French, or German, four hours.
Drawing, three hours.	Drawing, three hours.
Chemistry, 5 hours.	Chemistry, five hours.
General biology, six hours.	General biology, six hours.
Mineralogy, two hours.	Mineralogy, two hours.

SECOND YEAR.

First term.	*Second term.*
Latin, or German, or French, four hours.	Latin, or German, or French, four hours.
Chemistry, seven hours.	Chemistry, seven hours.
Geology, two hours.	Geology, two hours.
Zoology, one hour.	Zoology, one hour.
Invertebrate morphology, six hours.	Vertebrate morphology, six hours.
Histology, seven hours.	Embryology, seven hours.
Structural botany, five hours.	Systematic botany, five hours.
Physiology, two hours.	Physiology, two hours.

Preparatory course for students of medicine of the University of Virginia.

This first year of preparatory work will comprehend—

1. The course in general chemistry attended by all medical students.
2. A special course in physics.
3. A special course in biology and comparative anatomy.
4. The course in anatomy required of all medical students.

Those who are graduated in this preparatory course will attend for the second session—

1. The regular courses in physiology and surgery.
2. The regular courses in medical jurisprudence, obstetrics, and practice of medicine.
3. The course in materia medica.
4. The regular course in practical anatomy repeated.

THE PLACE OF THE STUDIES IN THE COURSE.

The admission requirements, the didactic, the clinical, and the laboratory instruction of the medical schools of the United States have in turn received attention. It has been shown how an effort is being made to dispense with a course in the humanities by inaugurating a preparatory course in science, and it now is necessary to examine the character of the medical curriculum as a whole, just as in the foregoing its parts have been discussed.

In 1876 on the call of several colleges a convention was called to meet at Philadelphia. This convention became the American Medical College Association, which adopted a scheme of instruction consisting of eight chairs. In 1882 the scheme of minimum requirements of the Illinois State Board of Health, adopted in 1880, went in effect. For convenience these curricula and that of the U. S. Army medical service are placed side by side.

Scheme of the—		
American Medical College Association.	Illinois State Board of Health.	U. S. Army medical service.
1. Anatomy (with dissection).	1. Anatomy.	Anatomy,
2. Physiology.	2. Physiology.	Physiology.
3. Chemistry.	3. Chemistry.	Pharmacy,
4. Materia medica and therapeutics.	4. Materia medica and therapeutics.	Materia medica and therapeutics.
5. Obstetrics.	8. Obstetrics and gynæcology.	Obstetrics and diseases of women and children.
6. Surgery.	7. Surgery.	Surgery.
7. Pathology.	6. Pathology.	General pathology.
8. Practice of medicine.	5. Theory and practice of medicine.	Theory and practice of medicine.
	9. Hygiene.[1]	Practical sanitation.
	10. Medical jurisprudence.	Medical jurisprudence.
		Toxicology.

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At their first meeting the Association of American Medical Colleges adopted the following:

Whereas a knowledge of the elementary branches of medicine should precede a study of the practical branches:

Resolved, That in the hope of inducing students to prolong and systematise their studies, this convention recommends to all medical colleges to offer to students the option of three courses of lectures, after a plan similar to the following: Students who have attended two full courses on anatomy, chemistry, materia medica, and physiology may be examined upon any of these subjects at the end of their second course. During their third course such students may devote themselves to the lectures upon the theory and practice of medicine, surgery, obstretrics, and diseases of women and children, upon which subjects only they shall be examined at the final examination for the degree of M. D., their standing, however, to be determined by the results of both examinations.

We now turn to the examination of the curricula of the schools having graded courses. In the first year we find invariably instruction in chemistry, anatomy, physiology and histology, and dissection. Materia medica in the majority of cases also comes in the first year. In half a dozen instances minor surgery is introduced thus early, and in eleven cases, at least, clinics, "general and surgical," as at the University of Pennsylvania, or medical, surgical, eye, and gynæcological, as at the University of Wooster, are also held. At least 9 colleges have instruction in hygiene during the year. Gynæcology, physical diagnosis, pathology, principles of surgery, medical jurisprudence, ethics, and physics have place in the first-year course of one or more colleges.

Comparing these figures with those of ten years ago, and remembering that 43 graded courses (several not obligatory) are represented now against 13 in 1881, it appears that in the main features no change has been made and that chemistry, anatomy, and physiology are the groundwork of medical instruction.

Twenty-six schools report definitely as to the examination at the close of the first year. General chemistry is disposed of by the great majority of the 26 schools and normal histology and materia medica by a great many. Several schools have a final examination on the bones and ligatures. It is impossible to speak with more than approximate accuracy on the character of the examinations of the first year except to say that the final examinations on the fundamental subjects of anatomy, and physiology, and the subject of materia medica are passed during the second year, to the curriculum of which we now turn.

The principal studies of the second year are anatomy, theory and practice of medicine, surgery, therapeutics and materia medica, obstetrics, medical chemistry, and physiology. Clinical instruction is very generally given during this year. In twenty cases diseases of women and in fifteen, diseases of children are a part of the curriculum, and in ten physical diagnosis and hygiene. The special branches—eye, ear, throat, chest, and nervous disease—are represented in from three to five schools, and medical jurisprudence in six schools. Minor surgery and toxicology are each represented in four schools.

The language used by the schools in their curriculums is not uniform, but it appears that of 43 schools having graded or progressive courses but 3 do not have anatomy during the second year. One of these has "surgical pathology," another pathological anatomy, and the third pathology illustrated with morbid specimens. Ten schools do not report physiology, at least under that name, though it may be included in "medical chemistry," which is specifically named by 8 of these 10 schools. But the new studies of importance of the year are theory and practice of medicine, surgery, and therapeutics. Pathology and clinical instruction are also mentioned, in many cases alone, in others in connection with medicine and surgery. Occasionally there is a term such as this: "Theoretical, operative, and clinical surgery," or "theoretical and clinical medicine or obstetrics."

At the close of the second year the final examinations in anatomy, physiology, materia medica and therapeutics, pathological anatomy, and chemistry take place, and in several schools an examination in medicine and in surgery occurs.

The third is the practical year of the three-year course. Medicine, surgery, and obstetrics are represented in the curriculum of every school, while the subjects diseases of women and of children are not reported by 4 and 12 respectively. The new subjects of the year are the special branches, which are clinically taught, to wit, diseases of the eye, ear, throat, skin, nose, and nervous and mental diseases. Pathology, materia medica, medical jurisprudence, and hygiene are important features. In several schools orthopædiatrics, electrotherapeutics, and bacteriology are mentioned as subjects of study.

The character of the four years' course is illustrated by the following programmes:

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The following tabular view illustrates the distribution of studies throughout the year.

1890–91, from September 25 to June 24.

FIRST CLASS.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Anatomy, L. Prof. Dwight, Lect. room C.		Anatomy, L. Prof. Dwight, Lect. room C.		*a* Anatomy, R. Drs. Conant and Munro, Lect. room C and D.	*c* Histology L. *b* Embryol. L. Asst. Prof. C. S. Minot, Lect. room B.
10	*d* Physiol. L. or Conf. Prof. Bowditch, Lect. room A. *b* Materia M. Dr. C. Harrington, Lect. room E.	Histol. Asst. Prof. C. S. Minot and Dr. Quincy. Laborat.	*a* Practical physiol. Dr. J. W. Warren. Physiol. Laborat.	Histol. Asst. Prof. C. S. Minot and Dr. Quincy. Laborat.	*b* Materia M. Dr. C. Harrington, Lect. room E.	Physiol. R. Prof. Bowditch, Lect. room A.
11	*c* Histol. Asst. Prof. C. S. Minot and Dr. Quincy, Laborat.	Physiol. L. Prof. Bowditch, Lect. room A.			Physiol. L. Prof. Bowditch, Lect. room A.	Chemis. R. or L. Prof. Hills, Lect. room A 1st 10 w.
12		Anatomy L. Prof. Dwight, Lect. room C.	Chemistry, L. Prof. Hills, Lect. room A.	Chemistry, L. Prof. Hills, Lect. room A.	*b* Hygiene, L. Dr. Harton. Lect. room E.	*a* Pract. physiol. Dr. J. W. Warren. Ph. Lab.
2	Laboratory *b* Chemis., L. Prof. Wood, Lect. room A.	Laboratory	Laboratory *b* Chemis., L. Prof. Wood, Lect. room A.	*a* Practical physiol. Dr. J. W. Warren, physiol. Laborat.	Laboratory	
3	Laboratory	Laboratory	Laboratory		Laboratory	
4		Laboratory	Laboratory		Laboratory	
5	Pract. anat. Asst. Prof. M. H. Richardson, Lect. room D.		Pract. anat. Asst. Prof. M. H. Richardson, Lect. room D.		Pract. Anat. Asst. Prof. M. H. Richardson, Lect. room D.	

a In sections.
b In the second half-year.
c In the first half-year.
d At 11 in second half-year.

A.=McLean Insane Asylum; C.=Boston City Hospital; Ch.=Children's Hospital; Cl.=Clinic; D.=Boston Dispensary; E.=Eye and Ear Infirmary; L.=Lecture; Ly.=Boston Lying-in Hospital; M.=Massachusetts General Hospital; O. P. Cl.=Out Patient Clinic; R.=Recitation; S.=Samaritan Home; S. B.=So Boston Insane Asylum; W.=Free Hospital for Women.
These abbreviations refer to the following as well as to the above tables.

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HARVARD MEDICAL SCHOOL—Continued.

SECOND CLASS.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8	*b* Bandaging. Dr. Burrell, No. Grove St.	*b* Bandaging. Dr. Burrell, No. Grove St.	*b* Bandaging. Dr. Burrell, No. Grove St.	*b* Bandaging. Dr. Burrell, No. Grove St.	*b* Bandaging. Dr. Burrell. No. Grove St.	*b* Bandaging. Dr. Burrell, N. Grove St.
9	Clin. Med. Prof. Shattuck, M. G. H.	Clin. Med. Asst. Prof. Mason, B. C. H. Bost. Disp.	Clin. Med. L. Prof. Shattuck, M. G. H.	Clin. Med. Dr. Vickery, M. G. H.	Clin. Med. Asst. Prof. Mason, B. C. H. Bost. Disp.	Clin. Med. Prof. Shattuck, M. G. H. *f* Med. visit. B. C. H. Asst. Prof. Mason.
10	*h* Surg. clin. M. G. H. and B. C. H. *c* Laryngo'py. Prof. Knight, M. G. H.	*h* Surg. clin. M. G. H. and B. C. H. *c* Laryngo'y. Dr. Hooper, M. G. H. *e* Therapeut's. Asst. Prof. F. H. Williams, B. C. H. 10-11.30.	*h* Surg. Clin. M. G. H. and B. C. H. *c* Laryngo'py. Prof. Knight. M. G. H. Laboratory. Drs. Wood and Emerson.	*h* Surg. clin. M. G. H. and B. C. H. *c* Laryngo'y. Dr. Hooper, M. G. H. Laboratory. Drs. Wood and Emerson.	*h* Surg. clin. M. G. H. and B. C. H. *c* Laryngo'py. Prof. Knight, M. G. H. *e* Therapeut's. Asst. Prof. F. H. Williams, B. C. H. 10-11.30.	*f* Surg. visit. B. C. H. Oct. 1-May 1. *c* Laryng'y. Dr. Hooper, M. G. H.
11	*a* Auscultation. Drs. Garland, Gannett, and Withington, M. G. H., Bost. Disp. and B. C. H.	*a* Auscultation	*a* Auscultation Cl. Conf. Child. Asst. Prof. Rotch and Drs. Buckingham and Sherman, Mar. and Apr. No. Grove St.	*a* Auscultation	*a* Auscultation B. C. H. Operations.	*a* Auscult. M. G. H. Operations.
12	Clin. Sur. after Oct. Profs. Porter and Warren, M. G. H.	*g* Surg. visit. M. G. H. Paediatrics. Asst. Prof. Rotch, Mar. and Apr. Lect. room B.	Surg. Conf. Prof. Porter, M. G. H. after Oct.	Adv. anat. L. Prof. Dwight, Lect. room C.	Pathology, L. Prof. Fitz, Lect. room C.	Museum.
2	*d* Chemistry, L. Prof. Wood, Lect. room A.	Path. histol. Drs. Whitney and Gannett, Laborat.	Chem. L. or R. Prof. Wood, Lect. room A.	*b* Bact'y. 6 L. Dr. Ernst, Lect. room B.	Path. histol. Drs. Whitney and Gannett, Laborat.	
3	Pathology. R. and Dem. Prof. Fitz, laboratory.		Pathology, L. Prof. Fitz, Lect. room C.	Pathology. Dem. and R. Prof. Fitz, laboratory.		
4	*b* Therapeut's. Asst. Prof. F. H. Williams, Lect. room E.	Theo. and Pr. R. Dr. Cutler, Lect. room E.	*b* Therapeut's. Asst. Prof. F. H. Williams, Lect. room E.	Theo. and Pr. R. Dr. Cutler, Lect. room E.	Clin. Conf. Profs. Shattuck and Mason, and Drs. Garland and Vickery, Lect. room C.	
5	Pract. anat. Asst. Prof. M. H. Richardson, Lect. room D.	*b* Therapeut's. Asst. Prof. F. H. Williams, Lect. room E.	Pract. anat. Asst. Prof. M. H. Richardson, Lect. room D.	-----	Pract. anat. Asst. Prof. M. H. Richardson, Lect. room D.	

a Till February in sections.
b In first half-year.
c Till January in sections.
d Examination in February.
e In second half-year in sections.
f Each half of the class on alternate weeks till February.
g In sections of half the class till March.
h In sections.

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THIRD CLASS.

9	Clin. Med. Prof. Shattuck, M. G. H. *f*Med. Visit. B. C. H. Asst. Prof. Mason.	Clin. Med. Asst. Prof. Mason, B. C. H. Boston Disp.	Clin. Med. Prof. Shattuck, M. G. H.	Clin. Med. Dr. Vickery, M. G. H.	Clin. Med. Asst. Prof. Mason, Ophthal. Cl. Prof. Williams, Clin. Otol. Jan.—Mar. Prof. Green, B. C. H.	Clin. Med. Prof. Shattuck, M. G. H.
10	.....	Gynaecol. Cl. Boston Disp.	Cl. Dermatology. Prof. White, M. G. H.	Dis. of nerv. System. Dr. Putnam, M. G. H.	Surg. visit. B. C. H. Gynaecol. Cl. Boston Disp. till April.	
11	*f*Surg. visit Oct.—May, B. C. H. 10–11:30.	*e*Surg. Cl. Prof. Cheever. Oct.—May B. C. H. 10–11:30.	Diseases of children. Asst. Prof. Rotch. No. Grove St.	*f*Med. visit. M. G. H. Prof. Shattuck, Nov.—Mar. Cl. E. & E. Inf. Jan. Feb. Mar. Profs. Blake and Green.	Operations, B. C. H. Child. Dis. Asst. Prof. Rotch. Lect. Room B. Oct. & Mar.—June, Disp. Nov.—Mar.	Operations. M. G. H.
12	Surg. cl. M. G. H. after Oct. Profs. Porter and Warren.	Surg. anat. L. Mar. and Apr. Prof. Porter, Lect. room D.	Surg. Conf. Prof. Porter, after Oct. M. G. H.	*f*Surg. cl. M. G. H. Profs. Porter and Warren.	*c*Syphilis. Dr. Post, Oct. Lect. room B. Nov.—Feb. Boston Disp.	Museum.
2	Gynaecol. L. Prof. Baker, Lect. room B. *g*Practical bacteriology. Dr. Ernst.	*g*Practical bacteriology. Dr. Ernst.	*a*Legal Med ..... *d*Prof. Draper, Lect. room E.	*a*Opthal. L. Prof. Williams. Lect. room A. *g*Practical bacteriology. Dr. Ernst.	*a*Legal Med. Prof. Draper, Lect. room E.	*g*Practical bacteriol. Dr. Ernst.
3	Theo. and prac. L. Prof. Minot, Lect. room E.	*a*Ophthalmology, L..... *d*Prof. Williams, Lect. room A. *b*Mental dis. Dr. Fisher, Lect. room A.	Obstetrics, L. Prof. Richardson, Lect. room B.	Theo. and prac. L. Prof. Minot, Lect. room E.	Obstetrics L. Prof. Richardson, Lect. room B.	Ment. dis. clinic *b*Bos. Lun. Hosp. Dr. Fisher. Sch. 1. Feeb. Mind. Chil. Jan. and Feb.
4	Surgery, L. Prof. Warren or Cheever, Lect. room C.	Dermatology, L. Prof. White, Lect. room B.	Surgery, L. Prof. Warren till Jan. Lect. room C.	Surgery, L. Prof. Cheever, Lect. room C.	Clinical Conf. Profs. Shattuck and Mason, and Drs. Garland and Vickery, Lect. room C.	
5	Otol. L., Oct., Nov., Dec., Lect. room B. Prof. Blake. Pract. Anat. Asst. Prof. M. H. Richardson, Lect. room D. Obstet. Conf. Dr. Green, after Jan. 1, Lect. room B.	Obstetrics, R. Dr. Green, Lect. room B.	Pract. anat. Asst. Prof. M. H. Richardson, Lect. room D.	Otol. L., Oct., Nov., Dec., Lect. room B.	Pract. anat. Asst. Prof. H. M. Richardson, Lect. room D.	

a During first half-year.
b During second half-year.
c Until March 1.
d Examination in February.
e For half the class.
f Each half of the class on alternate weeks
g In sections.

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HARVARD MEDICAL SCHOOL—Continued.

FOURTH CLASS.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Prof. Williams, eye diseases (c) City Hospital.	Prof. Green, ear diseases (4) Eye and Ear Inf.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, ear diseases (4) Eye and Ear Inf. Prof. Fitz, medical visit (12) M. G. H.	Prof. Williams, eye diseases (c) City Hospital.	Prof. Green, ear diseases (4) Eye and Ear Inf. Prof. Fitz, medical visit (12) M. G. H.
10	Asst. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, skin diseases (15) M. G. H.	Dr. Davenport, Women's dis. (5) Dispensary.	Asst. Prof. Rotch and Dr. Buckingham, child. dis. (c) Children's Hosp. and Dispensary.	Prof. White, skin diseases (15) M. G. H.	Dr. Davenport, women's dis. (5) Dispensary.
11	Prof. Richardson, Clin. Obstet. (5) Lying-in-Hosp.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	----------	Dr. Wadsworth, ophthalmos'y (6) M. G. H.	Prof. Richardson, clin. obstet. (5) Lying-in-Hosp.	Dr. Garland, medical clinic (c) Dispensary.
12	----------	Dr. Cabot, genito-urinary diseases (c) M. G. H.	----------	----------	----------	
3	Prof. Draper, Legal. Med. (c) B. C. H.	Prof. Baker, women's dis. (6) free hospital.	Prof. Draper, Legal Med. (c) College.	Prof. Baker, women's dis. (16) Free Hospital.	----------	
4	Dr. Bradford, orthopedic surgery (c) Children's Hosp.	Dr. Strong, women's dis. (2) Free Hospital.	Dr. Bradford, orthopedic surgery (c) Children's Hospital.	----------	Dr. Strong, women's dis. (2) Free Hospital.	

NOTE.—The time at which each exercise begins is shown in the margin at the left of each page; the time of its ending is subject to the instructor's convenience.

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Department of medicine, University of Pennsylvania—Order of lectures, daily.

FIRST YEAR, 1889-90.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 a. m	General chemistry	General chemistry	Chemical laboratory, two hours.		Dissection	Dissection or Phila. or Penna. Hospital, medical and surgical clinics, 10 to 12.
10 a. m	Hygiene	Chemical laboratory, two hours.		Topographical anatomy.		
11 a. m	Topographical anatomy.		Osteology	General pathology	Materia medica	Dissection.
12 m	Practical normal histology, one section two hours. Others osteology or dissection.	Practical normal histology, one section two hours. Others osteology or dissection.	Practical normal histology, one section two hours. Others dissect or attend med. and surg. clinics, U. H.	Practical normal histology, one section two hours. Others osteology or dissection.	Practical normal histology, one section, two hours. Others osteology or dissection.	Dissection or medical and surgical clinics, U. H.
1 p. m						
3:30 p. m		Anatomy	Histology	Anatomy	Anatomy	
4:30 p. m	Physiology		Physiology	Bandaging, lecture, until Dec. 15.	Phyisology	
7:30 p. m	Pharmacy, laboratory. Half the class.	Bandaging, sections, until Dec. 15.	Pharmacy, laboratory. Half the class.	Bandaging, sections, until Dec. 15.	Bandaging, sections, until Dec. 15.	

For the study of histology, osteology, and syndesmology the class is divided into sections, one of which is occupied at a time. Students not thus engaged dissect after December 1, or if not otherwise occupied may attend general clinics.

SECOND YEAR.

8.30 a. m						
9 a. m			Phila. Hospital gynæcol. clinic.	Medical chemistry	Medical chemistry, laboratory two hours.	Medical chemistry, laboratory two hours.
10 a. m	Physical diagnosis, practice by sections.	Physical diagnosis, practice by sections.	Phila. or Penna. Hospital, medical and surgical clinics.	Topographical anatomy.		Phila. or Penna. Hospital, medical and surgical clinics.
11 a. m	Topographical anatomy.	Morbid anatomy		Surgery	Morbid anatomy	
12 m	Practice	Surgery	Practical pathol. histology, one section two hours. Others attend gynæcological and general surgical clinic, U. H.	Medical clinic	Surgery	Practical pathol. histology, one section two hours. Others attend general medical and surgical clinics, U. H.
1 p. m	Practical pathol. histology, one section one hour. Others attend clinic, diseases of the ear, U. H.	Practical pathol. histology, one section one hour. Others attend clinic, skin diseases, U. H.		Practical pathol. histology, one section one hour. Others attend clinic, diseases of eye, U. H.	Practical pathol. histology, one section one hour. Others attend clinic, nervous diseases, U. H.	
3:30 p. m	Obstetrics, until Mar. 1. Embryology after Mar. 1.	Anatomy	Obstetrics, until Mar. 1. Embryology after Mar. 1.	Anatomy	Anatomy	Physical diagnosis, practice by sections.

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Department of medicine, University of Pennsylvania—Order of lectures, daily—Continued.

SECOND YEAR—Continued.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
4:30 p. m	Physiology	Phys. diagnosis, practice by sec.	Physiology	Therapeutics	Physiology	Therapeutics.
5:30 p. m		Practice		Practice		
7:30 to 10 p. m.	Dissection	Dissection	Dissection	Dissection	Dissection	

U. H.=University Hospital.
For the study of pathological histology and physical diagnosis the class is divided into sections, one of which is occupied at a time; those of the second-year students not thus engaged attend clinics.

THIRD YEAR.

10 a. m	Clinic, diseases of children, U. H., until Jan. 1st.	Demonstrations in morbid anatomy, section.	Phila. or Penna. Hospital, medical and surgical clinics.	Autopsies, 9 o'clock. Demonstrations in morbid anatomy, section.	Demonstrations in morbid anatomy, section, 9 o'clock. Med. jurisprudence.	Phila. or Penna. Hospital, medical and surgical clinics.
11 a. m	Orthopædics, U. H. Dem. in morbid anatomy, section.	Morbid anatomy		Surgery	Morbid anatomy	
12 m	Practice	Surgery	Gynæcological clinic, U. H.	Medical clinic	Surgery	Medical clinic, U. H.
1 p. m	Clinic, diseases of the ear, U. H. Ward classes, U. H.	Clinic, diseases of the skin, U. H. Ward classes, U. H.	Surgical clinic, U. H.	Clinic, diseases of the eye, U. H. Ward classes, U. H.	Clinic, nervous diseases, U. H. Ward classes, U. H.	Surgical clinic, U. H.
3:30 p. m	Obstetrics		Obstetrics	Didactic gynæcology, U. H.	Didactic dermatology, until Jan. 1st.	Obstetrics.
4:30 p. m	Operative surgery and fracture dressing, lecture.	Didactic ophthalmology, U. H.	Didactic otology until Jan. 1, U. H. Operative obstetrics, sections, after Jan. 1.	Therapeutics.	Practical surgery, two sections, two hours.	Therapeutics.
5:30 p. m	Practical surgery, two sections.	Practice		Practice	Operat. obstetrics, sections, after Jan. 1.	

U. H.=University Hospital.
For ward class instruction the third-year class is divided into sections. See special roster. Students of the third year are practically instructed in sections in bacteriology by Dr. Formad.

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FOURTH YEAR.

10 a. m	Clinic, diseases of children, U. H., until Jan. 1.		Phila. or Penna. Hospital, medical, surgical, and gynæcological clinics.	Autopsies, 9 o'clock	Medical jurisprudence.	Phila. or Penna. Hospital, medical, surgical, and gynæcological clinics.
11 a. m	Orthopædics, U. H			Practical instruction, orthopædics, until Jan. 1, U. D. Practical laryngology, after Jan. 1, U. H.		
12 m		Practical gynæcology	Gynæcological clinic, U. H.	Medical clinic	Clinical surgery, U. H.	Medical clinic, U. H.
1 p. m	Clinic, diseases of the ear, U. H.	Clinic, diseases of the the skin, U. H.	Surgical clinic, U. H.	Clinic, diseases of the eye, U. H.	Clinic on nervous diseases, U. H.	Surgical clinic, U. H.
2 p. m			Practical ophthalmology, U. H.	Practical dermatology, U. H.		
3:30 p. m	Mental diseases	Practical instruction, nervous diseases, U. H.	Electro-therapeutics, until Jan. 1, U. H. Practical instruction, otology, after Jan. 1, U. H.	Didactic gynæcology, U. H.	Didactic dermatology, until Jan. 1.	
4.30 p. m	Operat. obstetrics, until Jan. 1.	Didactic ophthalmology, U. H.		Clinical medicine. Ward class.	Genito-urinary diseases until Jan. 1. Operat. surgery after Jan. 1.	Clinical medicine. Ward class until Jan. 1.

U. H. = University Hospital.

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Schedule of studies of the University of Michigan.

FIRST YEAR.

FIRST SEMESTER.

Lectures and recitations:
- Descriptive anatomy.
- Osteology.
- Materia medica.
- Analytical chemistry.
- General chemistry.
- Hygiene.

Laboratory work:
- Pharmacognosy, 1 to 4 p. m., twice a week for one semester.
- General chemistry, 2 to 5 p. m., twice a week for one semester.
- Qualitative chemistry, 1 to 5 p. m., daily for one semester.
- Practical anatomy *a*, 1 to 5 p. m., daily for ten weeks.

SECOND SEMESTER. *b*

Lectures and recitations:
- Descriptive anatomy.
- Materia medica.
- Analytical chemistry.
- Pharmacy.
- Organic chemistry.
- Hygiene.
- Physics.

SECOND YEAR.

FIRST SEMESTER.

Lectures and recitations:
- Physiological chemistry.
- Histology.
- Descriptive and surgical anatomy.
- Therapeutics.
- Toxicology materia medica.

Laboratory work:
- Qualitative chemistry, 1 to 5 p. m., daily for one semester.
- Practical anatomy, 1 to 5 p. m., daily for ten weeks.
- Practical hygiene, 1 to 5 p. m., daily for twelve weeks.
- Electro-therapeutics, 1 to 4 p. m., daily for six weeks.
- Elementary histology, 1 to 4 p. m., twice a week for the semester.

SECOND SEMESTER.

Lectures and recitations:
- Physiological chemistry.
- Physiology.
- Descriptive and surgical anatomy.
- Therapeutics.
- Electro-therapeutics.

Laboratory work: *c*
- Qualitative chemistry.
- Practical anatomy.
- Practical hygiene.
- Electro-therapeutics.
- Advanced histology.

THIRD YEAR.

FIRST SEMESTER.

Lectures and recitations:
- Theory and practice.
- Surgery.
- Diseases of children.
- Diseases of women and obstetrics.
- Physiology.
- Meteorology and climatology.

THIRD YEAR—Continued.

FIRST SEMESTER—continued.

Laboratory work:
- Analysis of urine, 1 to 5 p. m., daily for twelve weeks.
- Practical pathology, 2 to 5 p. m., daily for six weeks.
- Practical hygiene, 1 to 5 p. m., daily for twelve weeks.
- Optional:
  - Advanced hygiene, 1 to 5 p. m., daily for one semester.
  - Sanitary examination of water, 1 to 5 p. m., daily for twelve weeks.
  - Detection of adulterations in food and drink, 1 to 5 p. m., daily for one semester.
  - Physiological chemistry, 1 to 5 p. m., daily for one semester.

SECOND SEMESTER.

Lestures and recitations:
- Theory and practice.
- Surgery.
- Diseases of women and obstetrics.
- Embryology.
- Dermatology.

Laboratory work:
- Analysis of urine. *d*
- Practical pathology. *d*
- Practical hygiene. *d*
- Practical physiology, 1 to 5 p. m., daily for the semester.
- Operative surgery.

FOURTH YEAR.

FIRST SEMESTER.

Lectures and recitations:
- Theory and practice.
- Surgery.
- Diseases of women and obstetrics.
- Diseases of children.
- Ophthalmology.
- Pathology.
- Diseases of nervous system.

Laboratory work:
- Clinical.
- Bandaging and dressing.
- Practical obstetrics.
- Physical diagnosis.
- Bedside practice.

SECOND SEMESTER

Lectures and recitations:
- Theory and practice.
- Surgery.
- Diseases of women and obstetrics.
- Laryngology and otology.
- Diseases of the nervous system and insanity.
- Pathology.
- Medical jurisprudence.

Laboratory work:
- Clinics and hospital practice.

Three lectures are given each forenoon; while the afternoons are devoted to laboratory and clinical work.

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a Each dissection requires ten weeks of afternoon work in the anatomical laboratory. There are two sections yearly, beginning in October and in January. Students may complete one dissection in their first year, and must complete the work by the end of the second year.

b Laboratory work, the same as in the first semester.

c Hours required, same as in the first semester.

d Hours required, same as in the first semester.

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Present four-years' course of Boston University School of Medicine (homœopathic)—Arrangement of studies.

FIRST YEAR.

First term.	Second term.	Third term.
Anatomy. (5) General chemistry. (2) Minor surgery. (1) Microscopy. (1) Histology. (1) Dissections (after Dec. 1). Examination in— Minor surgery.	Anatomy. (5) General chemistry. (2) Microscopy. (1) Histology. (1) Demonstrations. Dissections. Examination in— General chemistry.	Anatomy. (5) Physiology. (5) Histology. (1) Methodology. (1) Demonstrations. Dissections (till April 15). Examinations in— Anatomy and histology. Physiology.

SECOND YEAR.

Surgery. (3) General pathology. (1) Special pathology and therapeutics. (2) Materia medica. (2) Obstetrics. (2) Gynæcology. (2) Diseases of chest. (1) Diseases of chest (clinic). (2) Diseases of throat. (1) Sanitary science. (1) Surgical clinic. (3) Examinations in— Sanitary science.	Surgery. (3) General pathology and pathological anatomy. (1) Special pathology and therapeutics. (2) Materia medica. (2) Obstetrics. (2) Gynæcology. (1) Pædology. (1) Medical chemistry. (2) Diseases of chest. (1) Diseases of chest (clinic). (2) Diseases of throat. (1) Surgical clinic. (3) Examinations in— Medical chemistry. Diseases of throat. Gynæcology. Surgery.	Pathological anatomy. (1) Special pathology and therapeutics. (2) Materia medica. (1) Pharmaceutics. (1) Obstetrics. (2) Gynæcology (clinic). (1) Pædology. (1) Diseases of chest. (1) Diseases of chest (clinic). (2) Surgical clinic. (1) Examinations in— Pharmaceutics. Diseases of chest. Obstetrics. General pathology and pathological anatomy. Materia medica. Pharmaceutics. Pædology.

THIRD YEAR.

Surgery. (3) Special pathology and therapeutics. (2) Materia medica. (2) Practical obstetrics. (2) Clinics. (6) Surgical clinic. (3) Medical and surgical cases visited.	Surgery. (3) Special pathology and therapeutics. (2) Materia medica. (2) Operative obstetrics (in classes). (2) Practical obstetrics. (1) Clinics. (6) Surgical clinic. (3) Medical and surgical cases visited. Examinations in— Surgery. Gynæcology. Operative obstetrics.	Special pathology and therapeutics. (2) Materia medica. (1) Gynæcology (clinic) (1) Clinics. (6) Surgical clinic. (1) Medical and surgical cases visited. Examinations in— Materia medica. General pathology and pathological anatomy. Special pathology and therapeu ics.

FOURTH YEAR.

Special pathology and therapeutics (optional). Materia medica (optional). Ophthalmology. (1) Otology. (1) Clinics. (6) Surgical clinic. (3) Medical jurisprudence. Clinical reports. Obstetric cases. Dispensary practice. Examination in— Otology.	Special pathology and therapeutics (optional). Materia medica (optional). Ophthalmology. (1) Nervous diseases. (2) Dermatology. (1) Clinics. (6) Surgical clinic. (3) Clinical reports. Obstetric cases. Dispensary practice. Thesis. Examinations in— Dermatology. Ophthalmology.	Special pathology and therapeutics (optional). Materia medica (optional) Insanity and its jurisprudence. (1) Ethics and æsthetics. (1) Clinics. (6) Surgical clinic. (1) Dispensary practice. Examinations in— Nervous diseases and insanity. Thesis.

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To compare with the foregoing full courses the course of lectures at two

The course of lectures of the medical depart

Date.	Chemistry.	Anatomy.	Physiology.
First week, beginning November 3, 1890.	Physical phenomena and force; physical properties of matter.	Introductory—Histology; mouth.	Introductory: Chemical and histological composition of the body.
Second week	Physical properties; heat.	Alimentary canal	Normal histology; histology of tumors.
Third week	Light	Abdominal and pelvic viscera.	Digestion
Fourth week	Electricity, magnetism, galvanism, etc.	Male organs of generation.	Digestion; absorption.
Fifth week	Inorganic chemistry: Nonmetalloids, nomenclature, affinity.	Heart and respiratory organs.	Absorption; sanguinification.
Sixth week	Metalloids, physical and chemical properties of.	Nervous centers	The blood
Seventh week	Metalloids, physiological, pathological, and toxicological properties of.	Organs of special sense.	The blood: circulation.
Eighth week	Demonstrations with non-metallic elements and compounds.	...do	...do
Ninth week	Metallic elements, chemical, nomenclature, and affinity.	Osteology	Respiration
Tenth week	Metals, physical and chemical properties of.	Osteology; articulations.	Secretion and excretion.
Eleventh week	Metals, physiological, pathological, and toxicological properties of.	Articulations; muscles.	Excretion, renal
Twelfth week	Demonstrations with metallic elements and compounds.	Muscles	Nutrition and animal heat.
Thirteenth week	Organic chemistry: Carbon and its compounds.	Muscles; arteries	Contractility and locomotion.
Fourteenth week	Organic acids; sugar; fermentation, oils.	...do	Nervous system, chemistry and histology of.
Fifteenth week	Alkaloids	...do	Functions of the spinal cord and nerves.
Sixteenth week	Proximate principles of the human body.	Veins; lymphatics	Functions of the brain.
Seventeenth week	The urine	Nerves	...do
Eighteenth week	The blood	Nerves; surgical anatomy.	Functions of the cranial nerve.
Nineteenth week	Toxicological experiments.	Surgical anatomy	Functions of the sympathetic system; special senses.
Twentieth week	Organic chemistry	...do	Special senses
Twenty-first week	...do	Development of the organs.	Review

a One lecture per week will be devoted to the subject of hygiene.
b All teachings illustrated clinically in the amphitheater of the Charity Hospital and at the bedside in the wards of the same institution.

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schools still retaining the nongraded system are given.

ment of The Tulane University of Louisiana.

Materia medica therapeutics and hygiene.a	Practice of medicine.b	Surgery. c	Obstetrics and diseases of women and children. d
Therapeutic resources; foods—Remedial agents; hygienic measures.	General pathology and therapeutics.	Acute inflammation; phenomena, causes, and treatment of.	Introductory: Female organs of generation.
General therapeutics; absorption, elimination; action of medicines.	Theory of fever; treatment of febrile state.	Treatment of acute inflammation; chronic inflammation.	Ovulation, menstruation, conception, development of ovum.
Special therapeutics; classification.	Diatheses and cachexiæ.	Local effects of inflammation.	Decidua, chorion, placenta, etc., changes during and signs of pregnancy.
I. Agents acting locally.			
....do....	Causes of disease, epidemic and sporadic.	Diffuse inflammatory erysipelas; thrombosis, embolism, pyæmia.	Disorders of menstruation; abortion.
II. Agents acting systematically:			
1. Influencing nutrition.	Epidemic diseases....	Tumors, benign.....	Abortion; duration of pregnancy; molar pregnancy.
a Promoting digestion.			
b Modifying tissue change.	....do....	Tumors, malignant and semi-malignant.	Super and extra fœtation; missed labor; spurious pregnancy.
Promoting constructive change.			
....do....	....do....	Injuries, constitutional and local effects, contusions, wounds.	Gravid uterus, palpation, pelvis.
Promoting retrograde change.	Diseases of digestive apparatus.	Tetanus; burns; effects of cold.	Fœtal head; labor.
....do....	....do....	Hemorrhage.....	Stages and management of labor; puerperal state.
....do....	....do....	Injuries and diseases of arteries, veins, and nerves.	Presentations: Vertex, face, pelvis.
c Modifying body temperature.	Diseases of circulatory apparatus.	Injuries of bones; contusions and fractures.	Presentations: Shoulder, funis, placenta.
2. Acting against microbic poisons.	....do....	Fractures.....	Tedious labor.
3. Acting on special organs.	....do....	Injuries of joints; contusions, wounds, dislocations.	Tedious labor, postpartum hemorrhage; rupture of uterus.
....do....	Diseases of respiratory organs.	Dislocations.....	Inversion of uterus, retained placenta, puerperal mania.
....do....	....do....	Diseases of bones and joints.	Eclampsia; puerperal fever.
....do....	....do....	Anæsthesia; operations in general.	Eclampsia; puerperal fever; phlegmasia dolens; induction of labor.
		Regional surgery:	
....do....	Diseases of urinary apparatus.	Head.....	Obstetric operations: chloroform.
Acting on circulatory system.	....do....	Face, nasal and buccal cavities; throat.	Obstetric emergencies.
Acting on nervous system.	Diseases of the nervous system.	Cervical region.....	Do.
....do....	....do....	Thorax and abdomen.	First dentition: Convulsions, cholera infantum.
....do....	....do....	Pelvis.....	Catarrhal affections of children.

c Diseases and injuries of genito-urinary organs, syphilis, and many other affections, not mentioned above, are demonstrated in the amphitheater and wards of the Charity Hospital.

d Surgical diseases of women are taught in the wards and amphitheater of the Charity Hospital.

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Schedule of didactic and clinical lectures given in the Long Island College Hospital and the Hoagland Laboratory during the regular term.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8 a. m.	Practical histology and pathological anatomy, Prof. Van Cott, Hoagland Laboratory.	Practical histology and pathological anatomy, Professor Van Cott, Hoagland Laboratory.	Practical histology and pathological anatomy, Professor Van Cott, Hoagland Laboratory.	Practical histology and pathological anatomy, Professor Van Cott, Hoagland Laboratory.	Practical histology and pathological anatomy, Prof. Van Cott, Hoagland Laboratory.	
9 a. m.	Operative surgery, Professor Wight.	Practice of medicine, Professor McCorkle.	Practice of medicine, Professor McCorkle.	Gynecology, Prof. Skene.	Until December 21, diseases of the mind and nervous system, Prof. Shaw. January to March, medical jurisprudence, Hon. C. E. Pratt, justice of supreme court.	Practical histology and pathological anatomy, Prof. Van Cott, Hoagland Laboratory. Practice of medicine, Prof. McCorkle.
10 a. m.	Anatomy, Professor Lewis.	Anatomy, Professor Lewis.	Obstetrics, Professor Jewett.	Anatomy, Professor Lewis.	Until December 21, genito-urinary diseases, Prof. Rand. January to March urinary pathology Prof. Bartley.	Obstetrics, Professor Jewett.
11 a. m.	Materia medica and therapeutics, Prof. West.	Surgery, Professor Rushmore.	Materia medica and therapeutics, Prof. West.	Surgery, Professor Rushmore.	Surgery, Prof. Rushmore.	Pathological anatomy, Professor Ferguson, Hoagland Laboratory.
1 p. m.	Clinical teaching in the wards of the hospital and maternity, general clinics in the dispensary, instruction in physical diagnosis, and demonstrations in physiology.					
2 p. m.	Medical clinic, Prof. McCorkle.	Clinic for disease of women, Professor Skene.	Surgical clinic, till 4 p. m. Professor Wight.	Clinic for diseases of children, Professor Read.	Medical clinic, Prof. West.	Practical chemistry, 2 to 3.30 p. m., chemical laboratory.
3 p. m.	Until December 21, diseases of the skin, Professor Sherwell. January to March diseases of the mind and nervous system, Professor Shaw.	Physiology, Professor Raymond, Hoagland Laboratory.		Physiology, Professor Raymond, Hoagland Laboratory.	Until December 21, ophthalmology, Prof. Prout. January to March, otology, Prof. Mathewson.	Practical anatomy in dissecting room, every evening (except Sunday) from 8 to 10 p. m., Dr. Wm. W. Browning, demonstrator.
4 p. m.	Organic chemistry, Prof. Bartley; inorganic chemistry, Dr. Hutchinson.	Diseases of the throat and nose, Professor French.		Practical chemistry and urine analysis, till 5.30 p. m.; chemical laboratory.	Organic chemistry, Prof. Bartley. Inorganic chemistry, Dr. Hutchinson.	

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SUGGESTIONS AS TO HOW THE STATUS OF THE MEDICAL PROFESSION MAY BE ADVANCED.

In response to an inquiry for opinions as to the manner in which the status of the medical profession might be advanced, as far as it is influenced by the instruction in a medical school, about fifty replies were made, all, with three or four exceptions, from "regular" schools. These are grouped under four heads: Suggestions that all candidates be examined and licensed (*a*) by State boards, (*b*) by national boards, (*c*) that the course be extended two or three years, and (*d*) suggestions not falling in *a*, *b*, or *c*.

The drift of the suggestions in regard to the establishment of a State board is that it should examine the student as to his competency to practice medicine after he has obtained a certificate or diploma from a medical school or college, the State examination to be independent of the college. The dean of the Yale medical school puts the matter thus: "(1) No practice without registration; (2) no registration without diploma or examination; (3) an impartial board to determine what diplomas could be registered (desirable for effect on schools and as best meeting the conditions in the different States); (4) registration only by examination, but not until conditions are more uniform in different States."

In eight cases a national board (or boards) of examination is suggested. In two of these the matter is expressed by saying that it would be of great advantage if the laws relating to medical education were uniform throughout the country.

A third of the deans think that the course should be lengthened to three years of lectures or graded course, and in some cases four years of study. As this is what is being very rapidly done, no comment is required.

In the miscellaneous category are suggested a preliminary examination, more laboratory work, and compulsory graduation from a medical college. From Iowa it is answered: "A change in the law that now requires a student to study practical anatomy and then makes him a criminal for obtaining the material would materially advance the status of the profession." Another correspondent says: "The first law in Tennessee was passed by the legislature of 1888 and 1889. Having gained this one great step I think it unwise to attempt more too soon lest reaction result and we lose all."

Reply from the faculty of the medical department of the University of the State of Missouri.

Dr. WILLIAM T. HARRIS,
Commissioner of Education, Washington, D. C.:

DEAR SIR: Dr. A. W. McAlester asks me to reply to the request made on the back of the circular sent out by your Bureau for the purpose of obtaining statistical information of the medical schools of the country. I do so with some diffidence, and beg to call your attention to two things in this connection:

The first is, that length of course should, in my judgment, be measured by something else or additional than mere length of time; system, manner, and kind of instruction are of more importance in laying the foundation of a good medical education than time. The knowledge and mental discipline which the average medical student brings to the school or college of medicine is limited and deficient; to what extent this is the case no one connected with any medical school likes to tell. Such as he is, the medical student, hears five or six or even seven lectures a day; no one, I presume, will affirm that he masters them; and when the process is repeated another term, and may be a third, any general discernment has been sacrificed for the possession of disjointed and loose parts. The more a student at the beginning of his career is encouraged to attend to clinics and hospital practice, the more certain is this result attained; a certain handiness has effectually taken the place of knowledge. There are three things to counteract and overcome these tendencies:

1. A graded course, strictly adhered to and guarded well at the entrance; students should be made to take a narrow path rather than to spread themselves over the whole subject.

2. Lecture and text-book instruction not merely descriptive, but to stand in organic relation to the whole, and to be in themselves logical treatises of the subject they deal with.

3. Lectures to alternate with recitations; no quizz classes, where the aim is to rote and cram, but proper lectures and wise questions to strengthen as well as to test the intelligence, understanding, and progress of the students.

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The other point is, that a difference should be made between a college of medicine and a medical school; the former teaches medicine as a science, the latter mainly as an art; the former attempts to make scientific physicians, the latter practitioners. A State university has no more business to make practitioners in medicine or advocates in law than it has to make carpenters or shoemakers. If the State desires to do so, it could establish technical or trade schools, of which the so-called agricultural and mechanical colleges are types. They stand in my judgment coequal with the university, each called into life by the foresight of the General Government, and each for a distinct purpose, their connection being, I take it, somewhat like this:

I. State university:
  a. Academic college.
  b. College of medicine.
  c. College of law.

II. Agricultural and mechanical college:
  a. School of agriculture.
  b. Mining school.
  c. Engineering school.

This dissociation between the schools and colleges could of course be carried farther, but as I have already spoken at some length, I will only add that I believe it to be rash to set up the claim that a medical graduate is, in virtue of his graduation, a skillful and experienced physician; he should, after graduation, receive one or two years hospital practice, which in no case is rendered unnecessary on account of clinical attendance while a student.

Respectfully yours,

P. SCHWEITZER.
WOODSON MOSS, *Secretary.*
A. W. MCALESTER, *Dean.*

Reply from William M. Thornton, chairman of the faculty of the University of Virginia.

The following are recognized as the reforms most urgently needed in medical education:

1. The separation of the teaching and licensing bodies already carried out in Virginia should be adopted in all the States. This reform was advocated by the late Prof. James L. Cabell, of this State and University, in 1847, in an address before the American Medical Association; was persistently urged by him, and was finally carried into effect in 1885 in Virginia.

2. The grading of the course of medical studies and the inclusion of biology and comparative anatomy, as follows:

First year course: Chemistry, physics, biology, and comparative anatomy, with laboratory practice in each case.

Second year course: Human anatomy, physiology, histology, with laboratory practice in each case.

Third year course: Pathology (with laboratory practice), obstetrics, gynæcology, surgery (with laboratory practice), practice of medicine, materia medica, medical jurisprudence, clinical surgery.

3. The extension of the term of study to nine months in the year.

The step indicated in 3 has been approved by the faculty, but the visitors consider it one for which the public is not prepared.

WILLIAM M. THORNTON,
Chairman of the Fculty.

Reply from H. D. Didama, M. D., LL. D., dean of the College of Medicine of Syracuse University.

"If you had asked for opinions instead of information I might have answered:

"'Observation proves that higher matriculation requirements and better systems of education do not originate with the great schools in the State of New York, but are forced upon them by the profession through the legislature.

"'The schools did not adopt a matriculation examination of any value. Some had no examination whatever. Most of them had been content with the old unnatural two six-months' courses, both exactly alike, so that if the student had a good memory one course would have been all sufficient.

"'The profession should demand enactments requiring fitness at the entrance, a thorough graded course of three years of eight months each, and a rigid examination at the termination of the three courses, if not at the end of each year. But you asked only for information, and I forbear.'"

"H. D. DIDAMA,
"*Dean.*"

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Reply from I. T. Talbot, M. D., dean of the Boston University School of Medicine.

The great difficulty is, and has been in the past, that the student entering upon the study of medicine is often entirely lacking in qualification. This oftentimes arises from the fact that many men as ignorant as themselves, often holding diplomas, acquire reputations and large incomes. To obviate this state of affairs this school requires the first of its four years to be devoted to the preparatory or foundation studies of a course of medical instructions. These include, in addition to a good English education, Latin, physics, biology, zoölogy, microscopy, chemistry, botany, human osteology, comparative anatomy, and animal dissections. Many of these can be studied in the last year of a college course in arts, while the remainder can be pursued under the direction of a medical instructor or in the first year of a medical school. Knowledge on these subjects must be tested by a thorough entrance examination to the second year of the medical course. Such students will be prepared for thorough subsequent work.

I. T. TALBOT,
Dean.

THEOLOGY.

A comparison of the annual reports received from theological seminaries and departments during the ten years last past shows the necessity of having some standard by which may be determined the characteristics of a department or school of theology. There seems to be a distinction of some kind made by the management of higher institutions of learning in which theological instruction is given; for frequently the forms sent out by this Bureau are returned with the indorsement: "Not a regularly organized school of theology," or the Bureau fails to obtain a response at all.[1] Either of these circumstances vitiates the comparison of statistics of one period with those of another, for the school which appears in the report for 1881, but thereafter fails to report or reports that it is not a theological school for two successive years, will not appear in the report for 1883.

On the other hand there is still more embarrassment as to what constitutes a theological curriculum. Some colleges having a course in theology return the whole number of the students within their walls as members of the theological department. The effect of this may be illustrated by the reports of an institution during a series of years, as follows:

	Reported students.
1884 (in the theological department)	33
1885	137
1886 (the whole college attendance)	152
1887	152
1888 (in the theological department)	38
1889 (the whole college attendance)	147
1890 (in the theological department)	47

When the catalogue is at hand these errors can be rectified, but as the false figures are usually prepared for the printer long before the catalogue containing the true ones is received they become a matter of record.

Still referring to the curriculum of a true theological school, the question may be asked: "Of how many branches is that curriculum composed?" In the case of medicine anatomy and physiology are undoubtedly the groundwork of the study, but pathology, therapeutics, theory, and practice, etc., are also indispensable to complete the training of a skillful and legitimately successful physician. And we see how unremittingly the profession of medicine is laboring to awaken the

[1] The following letter admirably illustrates the above remarks:

MCKENDREE COLLEGE,
Lebanon, Ill., October 22, 1890.

COMMISSIONER OF EDUCATION:

DEAR SIR: Recently I received from your department a circular asking for information as to the theological department of McKendree College, Lebanon, Ill. In reply permit me to say that McKendree College has no theological department or school. There is a small theological class of ten to twelve students who pursue a limited irregular course of study in some branches of theology. This class can not be regarded as a department.

Yours,

T. H. HERDMAN,
V. P., McKendree College.

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legislative conscience to the necessity of passing laws that will prevent the profession from being embarrassed by the practice of inadequately educated men.

It may indeed be said that the ancient universities of Oxford and Cambridge have been in a certain sense theological seminaries, as the garb their students wear indicates, and that our own Harvard and Yale were theological seminaries to all intents and purposes in their early days. But if the interpretation of the term theological curriculum were to be based on such a plea, the difficulty of the statistician would not be solved. The question would no longer be what should be considered a curriculum of a theological school, but what difference if any is there between a school of theology and a college; for even in the sense that a study of the Bible and of the history of the Christian religion is enough to constitute a foundation for a pastorate, every German college (gymnasium) might be called a theological school, for in it some time is spent every day upon the Bible and church history. Under certain conditions there is much to be said for a course of instruction in theology that is not too advanced or too long, but it is mere justice to the advanced schools of theology that they should be classed by themselves.

Without pursuing further the discussion of so delicate a topic, the Bureau illustrates the idea of a theology school as held by two European countries, placing them in juxtaposition with several American curricula, one of which is a type of the several seminaries of the highest class that exist in this country and may therefore be compared with the faculties of France, especially those maintained by the Catholic Church, for the French state faculties of theology are all protestant institutions.

Course of lectures in the theological faculty of the University of Berlin.

General discussion of the sphere of theology (encyclopedia) and introduction to theological study on Wednesday and Sunday, 1 hour.

Introduction to the Old Testament, 5 hours. History of the text of the Old Testament, Sunday. Interpretation of Genesis, 4 hours. Interpretation of the Psalms, 5 hours. Interpretation of Isaiah, 5 times. Hebrew grammar for beginners (with exercises) 4 times. Exercises of the Institutum Judaicum (Society for Jewish Missions), 1 hour. The people of the Old Testament, 1 hour.

Introduction to the New Testament, 6 hours. Introduction to the synoptical Evangels, 1 hour. Biblical theology of the New Testament, 4 hours. Interpretation of the synoptical Evangels, 4 hours; of the Evangels and the Epistle of John, 4 hours; of the Epistle to the Romans, 4 hours; of the Epistle to the Galatians, 1 hour. Early history of the church, 5 hours. History of the church during the middle ages, 4 hours; in modern times, 5 hours. History of dogma, 4 hours. General history of religion, 4 hours. The early Christian and old Jewish burial places, especially the catacombs at Rome, illustrated by the monuments in the museums, 2 hours Sunday evenings. The edifices of the Evangelican faith, their construction and interior decoration, illustrated by the contents of museums[1] and by visits to the churches of Berlin, 1 hour. Explanation of selected old Jewish inscriptions found in Italy, 1 hour. Relation of Judaism to Christianity, 1 hour. Exercises on the history of the church, 2 hours. St. Augustine's confessions, 1 hour.

Philosophy in its application to religion, the proof of a Divine Being, etc., are taught in the faculty of philosophy.

Symbolism, 4 hours. Christian dogma, (apologetic), 4 hours; (systematic), 5 hours. Ethics, 5 hours. The recent opinions held as to Christ and the Christian dogma (Die neueren Ansichten von der Person Jesu und das christologische Dogma), 1 hour. Dogmatic society, 2 hours. Theological society, 2 hours.

System of practical theology, 4 hours. Homiletics and catechetic, 3 hours. Pedagogy and catechetic, 4 hours. The pedagogical system of the nineteenth century, 1 hour. Practical explanation of pastoral letters, 2 hours Sunday evenings. Introduction to practical sermon writing. Sermon writing, 2 hours.

Courses of instruction in the divinity school of a university of the United States.

As more courses are presented than are required for the degree of D. B., a certain amount of election will be allowed. Students must, in every case, submit to the faculty for its approval a list of the studies which they propose to take.

Old Testament.—1. Hebrew. Davidson's Grammar. Harper's Hebrew Method and Manual. Harper's Elements of Hebrew. Explanation of parts of the Pentateuch, Historical Books, and Psalms. Three times a week. 2. Hebrew (second course). Interpretation of parts of the Prophets and Poetical Books. Twice a week. 3. Jewish-Aramaic. Kautzsch's Grammar. Brown's Aramaic Method. Interpretation of selections from Daniel, Ezra, and the Targums. Twice a week, during the second half year. 4. History of Israel, political and social. Twice a week. 5. Old Testament Introduction. Twice a week. 6. History of the religion of Israel, with comparison of other Semitic religions. Twice a week. 7. Assyrian. Lyon's Assyrian Manual. References to Delitzsch's Assyrische Grammatik. Delitzsch's Assyrische Lesestücke. 8. Assyrian (second course). Delitzsch's Assyrische Grammatik. The cuneiform inscriptions of western Asia (interpretation of selections). Prof. Lyon.

Other Semitic courses are given, namely, two in Arabic, each twice a week; one in Ethiopic, once a week, and one in Babylonian-Assyrian, once a week.

The Semitic Seminary meets on the first and third Mondays of every month except June. At each meeting a short paper is read by a student or an instructor, and its subject-matter discussed; in this way the class work is brought into practical use, and various matters studied which do not come up in the class instruction.

New Testament.—1. New Testament times: the political, social, moral, and religious condition of the world when Christ appeared. Twice a week, during the first half year.

[1] The Union Theological Seminary of New York City has a museum of this kind, as perhaps have other American seminaries.

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Courses of instruction in the divinity school of a university, etc.—Continued.

2. Outline lectures on Theological Encyclopædia and literature; the characteristics of the New Testament Greek; the Septuagint; textual criticism; the life of Christ. Study of the Gospels. Essays and criticism. Twice a week. 3. New Testament introduction.—The origin, contents, and history of the New Testament writings, together with the formation of the canon. Twice a week during the second half year. 4. Outline lectures on the life of Paul; study of the epistles; essays and criticisms. Twice a week. 5. Lectures on our English Bible and its recent revision. Lectures on topics in biblical theology. Exposition of difficult texts. Essays and criticisms. Twice a week. 6. Biblical interpretation: Its history, its methods, its principles, and their application (to New Testament passages of historical, prophetical, ethical, and doctrinal import). Once a week. 7. Classical Aramaic (Syriac). Grammars of Nöldeke and Hutchinson-Uhleman. Roediger's Chrestomathia Syriaca. Reading of selections from the Peshitto Gospels, the Chronicles of Barhebräus and the Hymns of Efrem. Twice a week during first half-year.

The New Testament Seminary meets on the second and fourth Mondays of every month for the reading and criticising of essays by the students upon topics relating to the New Testament.

Church History.—[1. The conflict of Christianity with Paganism. Origin and development of the Roman primacy to its alliance with the Holy Roman Empire. A. D. 800. Twice a week. Omitted in 1889-90.] [2. The Mediæval Church, with especial reference to its effect upon public life and upon intellectual and social progress. Twice a week. Omitted in 1889-90]. [3. The era of the Reformation in Europe from the rise of Italian Humanism to the close of the Council of Trent 1850-1563. Twice a week]. [History of Christian doctrines. Twice a week. Omitted in 1889-90]. [5. Advance study and research in Church history in connection with courses 1 and 2. Omitted in 1889-90].

Comparative religion.—Studies in the comparative history of religions, particularly the Vedic religion, the Hindu philosophies, Buddhism, Mozdaism, and the Chinese religions. Twice a week.

Ethics.—Practical ethics of social reform; an examination of the problems of charity, temperance, labor, divorce, prisons, the Indian question, lectures, essays, and the study of institutions. Twice a week.

Theology.—1. The Philosophy of religion: an introduction to the study of theology. Once a week. 2. Systematic theology begun. The Psychological basis of religious faith. Once a week. 3. The same continued. The content of Christian faith. An elaborate essay on some theological subject is expected from each student taking this course. Three times a week.

The Theological Seminary meets on the first and third Wednesdays of every month.

Homiletics and pastoral care.—The structure and analysis of sermons. Once a week. 2. Each student writes six sermons during the year, three of which are preached before the two upper classes and criticised by students and instructor; the rest are criticised privately, both as to composition and delivery, in preparation for the public preaching named below. [3. Liturgies and the history of Christian worship; its prayers, its hymns, and its preaching. Once a week. Omitted in 1889-90.] 4. Pastoral care and the conduct of Christian worship. Lectures. Once a week during the second half year.

Elocution.—1. Class work twice a week, supplemented by private instruction. 2. Similar to the above.

General exercises.—Preaching by students in the chapel of the school, open to the public. Once a week. Meetings for debate. Once in two weeks. Meetings for religious conference, conducted by students, alternating with the above. Once in two weeks. Morning prayers, conducted by professors and students.

Special lectures.—A special course of six lectures by officers of the University who are not teachers in the Divinity School will be given.

French faculties of theology.

PARIS.

1. PROTESTANT.

Chairs.

Lutheran dogma.	Calvinistic dogma.
Evangelical morality.	Practical theology.
Exegesis.	History of philosophy.
Ecclesiastical history.	Hebrew.

Complementary course.

Practical theology.

Conferences.

The Greek and Latin Fathers of the Church.
Sacred Philology (New Testament).
German Theological language and literature and ecclesiastical history.

2. CATHOLIC.[a]

Chairs.

Dogmatic theology.	Canon law.
Scriptures.	Civil law.
Ecclesiastical history.	Public ecclesiastical law.
Oriental languages.	History of canon law.
Scholastic philosophy (philosophy of the schoolmen).	

[a] This is not a State school.

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MONTAUBAN.

CALVINISTIC ONLY

Chairs.

Dogma.
Evangelical morality.
Ecclesiastical history.
Exegesis and criticism.
Hebrew.
Philosophy.
Greek and advanced Latin (Haute latinité).

Complementary course.

Natural sciences.

Course of study in a Northern theological seminary.

FIRST YEAR.

Old Testament Literature: General Introduction; Hebrew. New Testament Literature: General Introduction; Special Introduction to the Gospels; Exegesis of selected Epistles of Paul. Sacred Geography and Antiquities. Old Testament History. Relations of Philosophy and Science to the Christian Religion; Theism; Theological Encyclopedia. Ecclesiastical Theology: Homiletics; Elocution.

The Junior Class has five weekly exercises in Hebrew; two in Introduction to the Old Testament and Archæology; one in Introduction to the New Testament; two in the Exegesis of Paul's Epistles; two in Old Testament History; two in Theism; one in Homiletics, and one in Elocution.

SECOND YEAR.

Old Testament; Hebrew; Special Introduction to the Poetical Books; Special Introduction to the Historical Books. New Testament. Life of Christ and Exegesis of the Gospels. Didactic Theology: Theology Proper, Anthropology begun. Church History. Government and Discipline of the Church: Homiletics; Criticisms of Sermons; Elocution.

The Middle Class has three weekly exercises in Church History; three in Didactic Theology; five in Old Testament Literature and Exegesis; two in the Life of Christ and Exegesis of the Gospels; two in Homiletics and Church Government, and one in Elocution.

THIRD YEAR.

Old Testament: Hebrew; Special Introduction to the Prophets: Biblical Theology. New Testament: Acts of the Apostles; Special Introduction to the Epistles; Biblical Theology (Elective). Didactic Theology: Anthropology, Soteriology. Eschatology. Church History. Relations of Philosophy and Science to the Christian Religion: Christian Ethics and Christian Social Science. Pastorial Care: Ordinances of Worship. Homiletics: Analysis of texts; Homiletical Criticism; Elocution.

The Senior Class has three weekly exercises in Didactic Theology; two in Old Testament Literature and Exegesis; one in Biblical Theology of the Old Testament; two in New Testament Literature and Exegesis; two in Church History; two in Homiletics and Pastoral Theology; two in Christian Ethics and Christian Social Science, and one in Elocution.

FOURTH YEAR.

The regular course is completed in three years, but students may, with great advantage, continue to prosecute their studies in the seminary for a longer period. It is not thought best to prescribe a fixed course of study for graduates. Each is at liberty to devote himself to those branches of theological learning for which he has the greatest aptitude, or which he judges to be most necessary or profitable to himself. Accordingly graduate students may at their discretion attend the lectures and recitations of the regular classes for the review of their previous studies; or they may individually conduct original investigation under the direction and advice of the professors and with the aid of the library.

SEVERAL TYPES OF CURRICULA OF THEOLOGICAL SCHOOLS IN THE UNITED STATES.

Course of instruction in the divinity school of a university.

JUNIOR YEAR.

Encyclopædia and Literature of Theology, 1 hour; Grammar of the Hebrew Language, in connection with the first 8 chapters of Genesis, 5 hours; Critical Study of the Greek Testament, consisting of two courses, (1) the Life and Teaching of Christ, as Presented in the Synoptic Gospels: (2) Studies in General and Special Introduction to the New Testament, and Methods and Principles of Textrial Criticism, 5 hours; The Philosophical Basis of Theism and the Self-Revelation of God, 2 hours.

MIDDLE YEAR.

Systematic Theology, 5 hours; Old Testament Bible Theology with special reference to the progressive stages of Divine Revelation to Israel, Biblical Aramaic (optional). The instructor in Hebrew will read with the class, (1) the more important prophecies of Isaiah in connection with a consideration of his entire work and the principles of Old Testament prophecy; (2) the earlier Psalms, with a General Study of the Hebrew Psalter, its origin, structure, and contents; General Church History, including its nature, divisions and sources, and the literature and the character of the societies among which Christianity spread, 3 hours; Lectures on the Epistles to the Romans and Corinthians, with special reference to the doctrinal and practical contents, 2 hours; Lectures and Criticised Exercises on the Principles of Ministerial Rhetoric.

SENIOR YEAR.

Homiletics, 4 hours during first half of year; Class Exercise in the Criticism of Sermons and Plans of Sermons, 1 hour; Pastoral Theology, 3 hours during the last half of the year; Class Discussions of Questions of Practical Interest Relating to the Work of the Church, History of Christian Doctrine and Symbolical Theology, 3 hours; Biblical Theology of the New Testament, 2 hours. The Prophetical Books of the Old Testament and reading once a week (or oftener) with those who wish to study Syriac, the Peshito version of the New Testament. The president of the university will lecture once or twice a week on one or more of the books of the New Testament.

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Course of instruction in the divinity school of a university—Continued.

GRADUATE OR FOURTH-YEAR CLASS.

For the year 1889-90 the following subjects of special study were announced, not excluding others which might be desired by members of the class:

I. Special topics in philosophy and theology.
II. Examination and discussion of a number of the more important marginal readings in the Revised Old Testament, as compared with the text now standing in the Revision.
III. A review of systematic theology in the reading and examination of Dr. Dorner's system of Christian doctrine, with free colloquial discussion.
IV. Weiss's Life of Jesus, with comments on the author, and conversational discussion and special investigations and essays by members of the class.
V. Schools of preaching and the history of preaching; with critical exercises and discussions.
VI. Weiss's Introduction to the New Testament. In addition to the discussion of the opinions of the author, the students will be directed in making investigations for themselves in other writings upon the same subjects and in the original sources.
VII. Schürer's History of the Jewish People in the Time of Christ; with special reference to the literature and thought of Judaism at this period as bearing upon New Testament interpretation.

English course of a seminary of theology.

A course which may be pursued by those who do not select the study of either the Greek or Hebrew language or only one of those languages.

JUNIOR YEAR.

Instead of the Hebrew and Greek there will be special exegetical exercises in the English scriptures and in biblical history, sacred geography, and antiquities. Origin, history, and canon of the Bible. Interpretation of the scriptures. Natural theism. The authority and inspiration of the Bible. Analytic rhetoric, study of expression in English. Drill in breething, vocalization, and elocution. Exercises in composition and criticism. Extemporaneous debates. Instruction is also given during the year in mental and moral science and to religions other than Christian.

MIDDLE YEAR.

Two exercises each week in the study of Old Testament criticism and exegesis. Two exercises each week in the study of New Testament criticism and exegesis. Old Testament theology. Systematic theology. History of the Church. Homiletics.

SENIOR YEAR.

Two exercises each week in the New Version of the Old Testament and two in that of the New Testament. Old Testament theology, History of the Church. Homiletics. Sacred rhetoric. Pastoral theology. Biblical homileties, consisting of a homiletical study of the discourses of our Lord, of those of Paul and Peter and other biblical preachers, and a homiletic study of epistles, psalms, and prophecies.

Theological department in a college.

This department is designed primarily to prepare young men to preach the gospel. It is open, however, to all students who wish to qualify themselves for Christian life and work. Of this privilege a number have already availed themselves, and it is the wish of the college authorities that their action should become general.

The following are prominent features of the work done in this department:

1. Direct contact of the student with the Bible itself is emphasized. 2. The historical portions of the Scriptures are studied early in the course. 3. Careful study of Hebrew and Greek is required of all who wish to complete the course. 4. Biblical antiquities and ancient history receive attention. 5. A knowledge of church history is given.

Students are graduated from this department on the following conditions: (1) There must be conclusive evidence of Christian character; (2) In addition to the studies of this department of theology the classical and scientific course must be completed. For either of these the student may substitute an equivalent course if he has taken it in another institution.

SOPHOMORE CLASS.

1. The Old Testament: First Division—Genesis to Ruth (three terms); Second Division—Samuel and Later Historical Books (three terms).
2. The Gospels (three terms).

JUNIOR CLASS.

First term.

Acts of Apostles.
New Testament Greek.
Hermeneutics.

Second term.

Acts of Apostles.
New Testament Greek.
Exegesis—Romans.

Third term.

Scripture topics.
New Testament Greek.
Exegesis—Hebrews.

SENIOR CLASS.

First term.

Hebrew.
Plan of Redemption.
Church History.

Second term.

Hebrew.
Evidences.
Homiletics.

Third term.

Hebrew.
Evidences.
Homiletics.

POSTGRADUATE COURSE.

First year.—Old and New Testament Introduction—History of Christian Doctrines.

Second year.—Theism and Anti-Theistic Theories, Relations of the Christian Religion to Philosophy and Science.

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The school of theology in a college.

This school gives a two years' course of nine hours a week in the essentials of theological learning.

Leading topics of study:

1. Biblical theology.
2. Exegetical study of Old and New Testaments.
3. Church history, homiletics.
4. History of doctrine.
5. Christian evidences. Theism.

Students preparing for the Christian ministry or any others may count these courses in the required amount of study for the degree of bachelor of divinity.

This degree will be conferred upon any resident student completing academic courses of eighteen hours a week with New Testament Greek in it, together with all of the studies offered in the schools of metaphysics, history, physics, and theology.

Ministerial students are expected to engage in some systematic professional work during vacation under some regular pastor or presiding elder.

REQUISITES FOR ADMISSION.

As is to be expected, the utmost unanimity prevails among the schools as to the desirability of excluding persons either morally or intellectually unfit to enter upon the sacred calling. While almost every school will admit an applicant who belongs to another denomination than that to which the school pertains, all demand that he shall be in full communion with some Christian (in two cases with an "Evangelical") church. The evidence of this is given by letters of recommendation from pastors, churches, or, in the Presbyterian church, from the presbyteries under whose care the student is requested or required to place himself. Nor does the precaution taken cease with the student's admission within the walls of the institution; in several cases at least some months elapse before he is admitted formally as a member of the school. There is another qualification that sometimes is mentioned as a prerequisite, which is called by one institution "earnestness of purpose" and by others a "call to the ministry."

As to the literary qualifications demanded by the schools, some diversity exists. It may be said, speaking generally, that a college education, at least that of a first-class high school, is the qualification that is thought requisite. But there are several ways in which this requirement is sometimes modified or dispensed with. It is modified when the scholastic deficiences of the pupil are compensated for by natural ability and when the course of the seminary is five or more years in duration, as is the case with many Roman Catholic seminaries, the Moravian Seminary, and others. It is dispensed with when the Greek and Hebrew Testaments are eliminated from the curriculum and the English Bible substituted. To enter upon the English course some institutions require that the applicant for admission be at least 25 years of age.

The instruction and lodging at these schools of theology being gratuitous and in the great majority of the schools pecuniary aid being furnished to the student, it is natural that a benefaction so wide in its scope and operating constantly in favor of new individuals, should seek to secure the attention of the student to the instruction which it provides. Indeed, in addition to the testimonials as to moral and intellectual fitness spoken of in a preceding paragraph, some schools are known to require a declaration in writing from the student on his admission, which may be represented by the following formula:

"Deeply impressed with a sense of the importance of improving in knowledge, prudence, and piety, in my preparation for the gospel ministry, I solemnly promise, in reliance on divine grace, that I will faithfully and diligently attend on all the instructions of this seminary, and that I will conscientiously and vigilantly observe all the rules and regulations specified in the plan for its instruction and government so far as the same relate to the students; and that I will obey all the lawful requisitions and readily yield to all wholesome admonitions of the professors and board of trustees while I shall continue a member of the institution."

Of the 145 schools given in Table 16 (p. 1045), 104 answer specifically the question addressed to them, "Have you noticed during the last decade that the students of later years were better prepared to enter upon the scientific study of their intended profession than those who preceded them?" In some cases the school had not been in existence for ten years, in others the dean had recently assumed charge. In many others the inquiry was passed by with a mere scratch of the pen, etc. Of the 104 specific answers, two say outright that they have nothing to base an opinion on, which leaves 102 schools whose answers are of service in the canvass of this important matter. Of these 102 answers 78 are in the affirmative, the greatest number being simply "yes," but 17 answer "decidedly," or "very much," or "marked or decided advance," as the case may be,

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while about half a dozen answer "slightly" or "somewhat," etc. Twenty schools answer "no," two of them adding that they are getting fewer graduates in letters or sciences. There are two classes of statements that deserve consideration, to wit: Those relating to the effect of the elective system in colleges and those giving the reason why the scholastic character of the applicants for admission has improved.

"One of our important seminaries in New England answers the question thus: The optional system tends to make the Greek preparation deficient; history is lacking; the English language and literature do not seem to have adequate attention. Students are not able to read Latin with facility; the philosophic systems seem to be a priori. We do not find a better average than in previous years."

By another eastern seminary of the highest standing we are informed: More come now than formerly with some preparation in Hebrew, which is a distinct gain. On the other hand, the spread of the elective system in colleges, with other causes, has probably lowered the average quality of preparation in Greek. From the Upper Mississippi Valley it is learned that "the scientific courses in colleges make more students enter the seminary knowing little or no Greek," but otherwise no change has been noticed.

From Pennsylvania one school reports that the students have much general intelligence and are equal to those who preceded them in training of faculties, but are behind them in the classical training especially called for in theological schools. By another, it is said that their college training has been broader and more varied, but it is not apparent that there has been any better mental development than under the earlier systems of college study when the curriculum was narrower. Depth has been sacrificed to breadth. From a third the answer is received: "No; as a general thing it may be said that classical schools have not yet distinguished themselves for thoroughness of mental training."

The Harvard and Yale divinity schools, on the other hand, assure the Bureau that there has been a very undoubted improvement, the latter school attributing it to stricter requirements for admission. The Harvard school instances the fact that all but one of its members were degree men, adding that a few years ago this would have been impossible. A half a dozen other seminaries attribute the improvement in scholarship of those they are admitting to their having exacted more elevated attainments for admission. Several attribute the fact to the advance of education in the South or West, as the case may be.

To the question Has the average age of the freshman advanced? an almost universal No is returned. In a university for the colored race, the dean answers that, whereas some years ago the students of the divinity school were ministers seeking further education, now the students come fresh from the preparatory school. Two seminaries give statistics. The dean of the Augustana Seminary at Rock Island gives the average age as varying from 27½ to 29½ during the last years; in some of the earlier classes it was over 30. Union Theological Seminary reports a slight increase, as follows:

1880-81	23.6
1881-82	24.6
1888-89	24.97
1889-90	25.1

Taking the answers to the two questions as to scholarship and age and considering them together some corroboration is found for the remarks upon the influence of the high schools, made under medical instruction (p. 878). But though the great extension of public higher elementary instruction, or, as it is called, secondary instruction, is in all probability subserving in America the purpose accomplished by the colleges of Germany and France (Gymnasien and lycées) it is still interesting to note the percentage of college graduates in attendance at our seminaries of theology. In attempting such a showing the Bureau must ask the indulgence of the reader who expects the utmost mathematical exactness. The diagrams given on pp. 846–7 are accurate as far as the schools have reported. But many schools will not report or insist in reporting by making a scratch of the pen so that it is not possible to tell whether they mean that an account of such matters has never been taken or that there are no students of the kind in their institution. The table which follows is an attempt to represent the percentage of college graduates in theological seminaries, by showing the percentage that has been reported by 27 schools in various parts of the country for the 10 years last past. Before canvassing the table, however, it may be said that, in the schools reporting an improvement in the scholastic attainments of their freshmen, 30 per cent of the attendance were students having a degree in letters or science.

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From the table it appears that there is a decrease in the number of graduates of colleges seeking admission to the theological seminaries (columns 2, 4, and 6) and that this decrease has been constant during the ten years last past. The general average for the ten years (column 8) for the New England and Middle States is the same, while that of the schools representing the West is much lower. Had the statistics of other sections of the Union been at hand the table might have been made more complete in its attempt to represent the condition of affairs in the country at large:

Students having degree in letters or science in twenty-seven schools of theology that report for each of the ten years 1880–81 to 1889–90 (omitting 1882–83).

Divisions.	1880–81.		1884–85.		1889–90.		1880–1890[a].	
	Attendance.	Per cent having degree.	Attendance.	Per cent having degree.	Attendance.	Per cent having degree.	Attendance.	Per cent having degree.
	1	2	3	4	5	6	7	8
New England schools:								
1	29	83	52	92	62	76	397	87
2	90	90	96	94	136	84	962	87
3	25	4	29	7	33	9	277	13
4	61	97	41	78	61	77	448	88
5	63	62	77	69	136	69	845	68
6	31	48	20	75	36	97	204	76
7	19	90	27	74	41	73	[b]208	74
8	17	18	26	16	34	3	262	19
9	60	60	53	64	56	62	547	61
For the 9 schools	395	71	421	71	595	70	4,150	69
Middle States:								
10	21	0	7	0	36	0	197	0
11	88	38	97	37	122	8	900	27
12	119	94	146	80	172	90	1,309	90
13	45	96	29	90	38	71	274	84
14	33	97	25	92	18	83	194	85
15	55	75	44	50	51	55	460	58
16	14	7	18	22	23	13	161	14
17	87	77	85	74	92	74	[c]691	77
18	116	93	133	90	164	84	1,153	85
19	31	97	35	100	57	93	358	96
20	29	86	35	86	56	82	362	86
21	17	6	14	0	35	3	233	3
For the 12 schools	655	76	671	73	864	66	6,292	69
Western States:								
22	39	77	63	32	177	21	801	21
23	90	54	72	51	142	13	898	34
24	17	18	37	43	36	25	316	38
25	41	77	49	61	106	31	565	49
26	14	86	15	60	11	45	134	61
27	36	97	23	87	28	89	262	90
For the 6 schools	237	67	259	51	500	26	2,976	42
For the 27 schools	1,287	72	1,351	68	1,959	57	13,418	63

[a] Omitting the year 1882–83. [b] Omitting 1880–81. [c] Omitting 1889–90.

CURRICULUM.

LENGTH OF THE COURSE.

The course of the theological seminary proper is three years. The principal exception to this is in the case of the seminaries of the Roman Catholic Church, where the course is four, five, or six, or even more years in duration. The regular course of the Catholic University of America covers four years. Other exceptions are the schools having a shorter (not necessarily an English) course or a postgraduate course. In the schools of New York and New England, and of Chicago there are from two to six postgraduate students. The reason for the length of the course in Catholic seminaries, excluding the course of the

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Catholic University, is shown by the following; there are really three courses, one dovetailing into the other:

The object of the Salesianum is the remote and immediate preparation for the holy priesthood, and only such students are received as express their intention of becoming priests.
In accordance with this object, the education imparted embraces the classical studies, philosophy, and theology, nine years in all, with the following courses:

I. CLASSICAL COURSE (embracing five years).

The following branches are taught during this course:
1. Christian doctrine.
2. Ancient languages:
   (*a*) Latin (Schultz's Grammar and Exercise-book, Nepos, Cæsar, Cicero, Virgil, Horace).
   (*b*) Greek (Spies's Grammar, Exercise-book, Xenophon, Homer).
3. Modern languages:
   (*a*) English.
   (*b*) German.
   (*c*) French (optional).
4. Mathematics:
   (*a*) Arithmetic.
   (*b*) Algebra, as far as logarithms, inclusive.
   (*c*) Geometry (stereometry, trigonometry.
5. History and geography.
6. Natural philosophy.

II. PHILOSOPHICAL COURSE.

This course embraces:
Philosophy.
Church history.
Natural philosophy.
Hebrew.

III. THEOLOGICAL COURSE.

This course embraces:
Dogmatic theology.
Moral theology.
Church history (continued and finished).
Canon law.
Introduction into the Holy Scripture.
Exegesis.
Homiletics.
Liturgy.

This system, though not characteristic of, is not unrepresented among Protestant schools.

The two-year course is the English course. No better illustration can be given as to what this course is than the English course of Oberlin Theological Seminary. This course has been established in view of the present urgent need of more ministers and of the fact that many young men now in secular business would be willing to give their lives to the preaching of the gospel, but can not pursue a course of preparation extending over 10 years. It is designed for mature young men of at least 25 years of age, who, though possessing perhaps but a common English education, have acquired, in practical business, familiarity with affairs and acquaintance with men. It is believed that men of this class by two years of judiciously applied study can acquire such a knowledge of the English Bible, of systematic theology, and of other fundamental branches as will qualify them for great usefulness in many fields. Should a sufficient number apply, some special additional instruction will be provided for those looking forward to Y. M. C. A. secretaryships as a substitute for the homiletic training of candidates for the pulpit. The programme is as follows:

Tabular view of the English course of Oberlin Theological Seminary.

	Fall term.	Winter term.	Spring term.
First year	1 English New Testament. 2 Homiletics, 45 hours. 2 Rhetoric, 25 hours. 3 Psychology and logic.	1 English New Testament. 2 Homiletics, 12 hours. 2 Rhetoric, 48 hours. 3 Logic and moral philosophy, 56 hours. 3 Home missionary lectures, 12 hours.	1 English New Testament. 2 Homiletics, 29 hours. 2 Moral philosophy, 20 hours. 3 Christian evidences.
Second year	1 English Old Testament. 2 Theology. 3 Pastoral theology.	1 English Old Testament. 2 Theology. 3 Homiletics.	1 English Old Testament. 2 Theology. 2 Modern skepticism. 3 Positive institutions. 3 Church polity.

Another species of the two-year course is shown by the course of the Jeremiah Vardeman School of Theology in William Jewell College, Liberty, Mo. The regular course of this school is intended for two years in the case of those who are fully prepared to proceed with the study of the Scriptures in the Greek or Hebrew or who have taken the first degree in college; but, to afford profitable instruction to those who have not a classical education and to those who desire to study theology at the same time that they pursue their literary studies, the

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course is so arranged as to be pursued in connection with a literary course, and parts of the theological course which are adapted to the development of mental power are taken by agreement of the faculty, in lieu of proportionate parts of the literary course in the examination for the degree of A. B. Theological students who are candidates for the degree of A. B. may substitute, in each year after the freshman, one class in theology for one other class with an equal number of recitations, except in Latin, Greek, English, and geology.

Still another kind of two years' course is shown by the curriculum of the Moravian Theological Seminary. The course of study, arranged for six years, is divided into two departments: (1) Classical, of four years' duration, and (2) theological, of two years' duration. A class graduates and a new class is formed every alternate year. Hence only three classes of the six are in existence at the same time. The number of lectures and recitations for each class ranges from 20 to 25 per week. The figures in parentheses indicate the number of hours a week.

Theological department [of the Moravian Seminary].

First year (5th year).

Introduction to the Old and New Testaments (4).
Old Testament (4).—History of Israel.
New Testament (4).—The Synoptical Gospels.
Church History (4).—Fisher's Manual, from the Reformation.
Moravian Church History (2).—The Ancient Church of the Brethren. De Schweinitz: Unitas Fratrum.
Homiletics (2), with written sermons.
German (4).—Essays, orations. Reading of German authors.

Second year (6th year).

Old Testament (4).—Isaiah and Minor Prophets.
New Testament (4).—St. John's Gospel. Epistles.
Systematic theology (4).—Lectures.
Moravian Church History (2).—The Renewed Church of the Brethren.
Pastoral Theology (2), with sermons, written and delivered.
Liturgics (2).—Results of the General Synod. Provincial Digest.
German (4).—Essays, orations. Reading of German authors.

A three years' English course is offered by Hillsdale College, the last year being the course followed by the student in the "full course."

English theological course.

Preparatory.—Fall: English grammar; arithmetic; United States history. Winter: English grammar; arithmetic; elementary philosophy. Spring: Reading and orthography; civil government; composition and rhetoric.
Junior.—Fall: Systematic theology; inorganic chemistry; ancient history. Winter: Systematic theology; organic chemistry; Roman history. Spring: Systematic theology; elementary botany; English history.
Middle.—Fall: Systematic theology; mental philosophy; logic. Winter: Systematic theology; evidences; rhetoric. Spring: Sytematic theology; moral philosophy; English literature.
Senior.—Fall: English Bible; pastoral theology; historic doctrines. Winter: English Bible; homiletics; historic doctrines. Spring: English Bible; homiletics; historic doctrines.

As illustrating a composite course (academico-theological) the course in divinity of the Southwestern University is given. The curriculum of this university is arranged on the coördinate school principle, the completion of the course of a certain number of schools entitling the student to a degree. The divinity course is the only professional course as yet established in the university. It was organized by the board in June, 1885, and has been in operation for five years with the most satisfactory results. The various schools and departments of this course stand in the same relations to the university as the academic schools. The two faculties are in reality but one, and have the same government and discipline. The chancellor is the chief executive and the presiding officer of the whole. Schedule of recitations is as follows:

I. 8:45 to 9:30—Jun. French, bookkeeping, Monday, Wednesday, and Friday; Sen. French, Tuesday, Thursday, and Saturday; Jun. Greek, El. Latin, 5 days.
II. 9:30 to 10:30—Sen. Latin, Sen. Ec. Hist., Jun. Met., Monday, Wednesday, and Friday; Int. Latin, Sen. N. P., Sen. Met., Tuesday, Thursday, and Saturday; Jun. Hebrew, 4 days; Subj. Math., El. Algebra, 5 days.
III. 10:30 to 11:30—Jun. N. T. Greek, Sen. German, Int. Greek, chemistry, Jun. Bible, Monday, Wednesday, and Friday; Sen. Greek, Jun. Ec. Hist., Geol., etc., Int. Bible, Jun. History, Tuesday, Thursday, and Saturday; Sen. Theol., 5 days.
IV. 11:30 to 12:30—Sen. Math., rhetoric, Jun. Lit., Monday, Wednesday, and Friday; Sen. Hebrew, Int. Math., ethics, Pol. Econ., Tuesday, Thursday, and Saturday; El. Greek, 5 days.
V. 12:30 to 1:30—Sen. N. T. Greek, Jun. N. P., Sen. Bible, Monday, Wednesday, and Friday; Sen. Lit., Tuesday, Thursday, and Saturday; Jun. Math., Jun. Theol., arithmetic, 5 days.
VI. 1:30 to 2:15—Sen. Hist., Monday, Wednesday, and Friday; Jun. German, Tuesday, Thursday, and Saturday; Jun. Latin, 5 days.

Three years, however, is the time devoted to study in our seminaries of theology. The studies pursued during that period group themselves around certain

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central or leading ideas, but so homogeneous is the course that as you move from the center of one group towards that of another it becomes more and more difficult to distinguish the periphery of the one from that of the other.

EXEGESIS.

This department may be considered under three heads, the first of which is concerned with commentaries on or introductions to the study of the text of the Greek and the Hebrew Testaments, and the second and third with the personal study of the text of those works. It is evident however that the translation of the Greek and Hebrew Testaments may be made partially an exegetical exercise, even in the case of the tyro in Greek or Hebrew, and may become wholly so in the case of well-prepared students. In the larger seminaries of the country the chairs of exegesis are known as "New (or Old) Testament language and literature" or as "Literature and interpretation of the Old (or New) Testament," as the case may be, or words to the same effect. Occasionally there is an instructor in Greek or Hebrew to assist the chair. The arrangement of one of the important theological schools of the country will illustrate, however, that the name of the chair is not always indicative of the special work performed by its occupant. In this school the philological and exegetical work is distributed among two chairs (both endowed) and an associate professor of biblical philology. The titles of the chairs are "Hebrew and cognate languages" and "sacred literature." The professor of the Hebrew and cognate languages leaves the philological work in Hebrew to the associate professor of philology and confines himself, in the regular course, to the higher exegesis of the Old Testament, while the professor of sacred literature devotes himself to teaching both New Testament Greek and exegesis.

The threefold character of the work of the department of exegetical study is rather clearly indicated during the first year of the American theological course, inasmuch as the work in Greek and Hebrew of that year is probably more philological than theological; though the language exercises are generally accompanied by study of a work on the harmony of the gospels and sometimes by the principles of higher criticism. How far the preparation of the students will permit of the lower or textual criticism of the languages in which the testaments are written, it is impossible to say. The Greek text read is usual one of the synoptic Gospels or the Acts, sometimes it is John, at other times the Septuagint, or one or more of the Pauline Epistles. The study of Hebrew is usually concerned with the grammar of the language and obtaining a vocabulary.

In the second year of exegetical study in the higher order of seminaries the text of the testaments becomes the foundation of the work and there is unity given to the department that justifies the inclusion of the study of Greek and Hebrew as a branch of exegesis. In Greek the Pauline epistles and in Hebrew the historical and prophetical writings and the Psalms are the principal exegetical studies of the second year, the text giving occasion for an excursus in one or another direction, as may be illustrated by the following course:

FIRST TERM OF SECOND YEAR.	SECOND TERM OF SECOND YEAR.
1. Lectures on the higher criticisms of the poetical and prophetical books once a week by the professor of Hebrew. 2. Hebrew poetry: Exposition of selections of various kinds of poetry from the earlier periods of Hebrew history twice a week by the same professor. 3. Exposition of the Book of the Acts or of the epistles of the imprisonment, with special lectures on practical exposition as related to preaching, twice a week by the professor of sacred literature.	1. Hebrew poetry: Exposition of selections from the later periods of Hebrew poetry twice a week, including portions of Proverbs, Job, Song of Songs, and Ecclesiastes, with the professor of Hebrew. 2. Critical and poetical exposition of the Epistle to the Romans, Galatians, or First Corinthians, twice a week with professor of sacred literature.

In the third year exegetical study approximates, from the Old Testament side, the history of the Messiah—that is to say, the early history of the Christian religion—and, from the New Testament side, the history of its earliest teaching. The study of the prophets, and especially of the facts of Messianic prophecy is preëminently the final study in Hebrew exegesis, while the study of the Pauline epistles, especially those to the Romans and Hebrews, and the catholic epistles is equally preëminent in the exegesis of the New Testament. From an examination of the programmes of the theological seminaries of the country, a tendency is shown to take up the historical books of the New Testament as introductory and follow them with the Pauline epistles during the middle and senior years.

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In the Hebrew testament the same course appears to be followed: Genesis, the historical books, in selections, the Psalms, but finally and specially Messianic prophecy. But it is better, perhaps, to turn from such generalizations to compare what is taught as Old Testament exegesis in one of our first-class seminaries, with what is taught in the Hebrew Union College.

Department of exegetical theology.

Old Testament. (Professor Bissell).—Junior class, five hours per week during the first semester: The principles and forms of Hebrew grammar and a sufficient vocabulary to enable the student to read at sight the narrative portions of the Hebrew Bible; four hours per week during the second semester: reading considerable portions of the Hebrew text, with a review of the grammar; one hour per week during the second semester: lectures on general introduction to the Old Testament. Middle class, four hours per week during the first semester, divided as follows: exegesis of prophetical books, two hours; interrelations of the Pentateuchal Codes, one hour; institute work in Pentateuchal criticism, one hour. The institute work will include the examination of selected passages and the reading and criticism of essays on assigned topics. An optional in Hebrew sight-reading, not exceeding one hour per week during the second semester. Senior class, two hours per week during the second semester: lectures on Messianic prophecy and study of the more important Messianic passages; also lectures on special introduction to the disputed books of the Old Testament. An optional in biblical Aramaic, open to all students one hour per week throughout the year, and an optional in Arabic, open to the senior class one hour per week during the second semester. [A special class, if desired, will hereafter be formed in junior year for those who have studied Hebrew before entering the Seminary.]

Bible, ancient version and commentaries.[1]

(*a*) *Thorah.*—Taught by Rabbi Davidson in junior and second collegiate classes, with Targum, Rashi, and Ibn Ezra: Leviticus, chapters xix, xxi, xxiii, xxiv, xxv. In first collegiate class: Deuteronomy, with Targum and Rashi, chapters xxix, xxxii, xxxiii, xxxiv. In A Grade: Genesis, with select portions of Rashi in chapters i, vi, xii, xiii, xviii, xxii. Taught by Preceptor Mannheimer in Grade B: Leviticus, chapters xvi to xxvii, with cursory reading of Rashi. Taught by Assistant Preceptor Feldman in B Grade: Leviticus, chapters i to xv.

(*b*) *Former Prophets.*—Taught by Preceptor Mannheimer in Grade D: Joshua; Judges, chapters i to viii. Taught by Professor Zirndorf in B Grade: I Kings and II Kings, chapters i to iii.

(*c*) *Latter Prophets.*—Taught by Preceptor Mannheimer in junior and second collegiate classes: Jeremiah complete. In first collegiate class: Isaiah, chapters xiii, xiv, xxi, 1-10: xxxiv, xxxv, and xl to the end of the book: memorized, chapters xl, liii, lviii.

(*d*) *Hagiography.*—Taught by Preceptor Mannheimer in senior class: Job complete. In Grade A: Daniel, Ezra, and Nehemiah, with Aramaic grammar and translations from the Aramaic into Hebrew. Taught by Professor Zirndorf in A Grade: Proverbs, chapters i to xviii. Taught by Assistant Preceptor Feldman in Grade D: Psalms, chapters i to v, viii, xiii, xv, xix, xiii to xxv, xxvii, xxx, xxxiii. Taught by Rabbi Charles Levi during second semester in B Grade: Psalms, chapters civ (committed to memory), cxx to cxl.

The order followed in New Testament exegesis may be represented by the following:

Department of New Testament Exegesis.

I. GENERAL SUBJECTS.

Principles of interpretation; Biblical criticism: its history, principles, and results as related to the text of the New Testament. Archæology and geography of the New Testament period. The method of study in these subjects is by lecture, recitations from text-books, and essays prepared by the classes.

II. INTRODUCTION.

General and special introduction to the books of the New Testament, with an examination of the history and special characteristics of each book, and an outline analysis of its contents. This occupies one exercise a week throughout the course, and is intended to secure, on the part of the student, the careful translation or reading of all the books, with a study of the plan and argument of each book and of passages of special interest in it, together with an investigation of its canonicity and of other questions belonging to introduction.

III. EXEGESIS.

First year.—1. The Gospels: Translations and exegesis of select passages, embracing the chief events in the life of Christ, the miracles, the parables, and several of the principal discourses.
2. The acts and the Epistles of Paul: Translation and exegesis of select passages from each book, in connection with the studies of its plan and an outline analysis of its course of thought.
Second year.—The Epistle of Paul: Translation and exegesis of Romans and Hebrews.
Third year.—The Catholic Epistles and Revelation: Translation and exegesis of James, First Peter, First John, and of select portions of the other Catholic epistles, with the translation of a part of the Book of Revelation and an examination of the current theories of its interpretation. Also a comparison of the style, composition, and the type of doctrine in the several New Testament writings.

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1 This College consists of two departments, the preparatory and the collegiate. The preparatory consists of Grades D, C, B, and A, and the collegiate consists of first collegiate, second collegiate, junior and senior classes. No C grade this year.

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Biblical archæology (or "antiquities") is usually classed under exegesis and perhaps should have been made a fourth division of the subject. But its study does not yet appear to have been introduced with the thoroughness that warrants such prominence, though lately a Hull professorship of Biblical geography and archæology has been established in the Ryder Divinity School of Lombard University. More prominent as an exegetical study than archæology is the study of the Semitic languages and of the hieroglyphics and cuniform characters, the last two being, indeed, a prerequisite for first-hand archæological study in the present conception of the term. As these philological studies are optional they will be spoken of after the remaining three heads of the theological course have been given.

In closing this brief summary of the exercises of the department of exegesis a word of explanation may be permitted. In several cases the philological instruction in Greek and Hebrew is not called exegesis but philology: in other cases the instruction in the works written in one or the other of these languages and in books written about those works is called Biblical study, and in others still Old and New Testament study and interpretation. In distributing the matters taught in the way of exegesis under the heads of commentary and study of the texts it must not be supposed that this Bureau has attempted or desired to improve theological terminology, but that convenience alone has been consulted. The information possessed by the Bureau will not permit a close classification into philological and exegetical study, the proper distinction, and it is not impossible that such a classification can only be made after a thorough personal study of the syllabus of the various courses in exegesis as they are actually given. Indeed, when the question of philology is up as a department of study in a theological seminary it is advisable to consider that at the Harvard Divinity School German is required for the degree of bachelor, and that the German is recommended to be taken in the junior year, "as a knowledge of this language will be found of great service during the remainder of the course." Nor should it be forgotten that in the Western Theological Seminary and elsewhere Augustine's De fide verum quæ non videntur, and Thomas Aquinas's In Symbolum Apostolorum Expositio, etc., are read in the original, and that "high latinity" is a study in the French faculties of theology.

THEOLOGY.

In natural sequence though not in importance the department of theology follows that of exegesis. This department of the curriculum may be treated under two general heads, the first of which may take the name of systematic theology or dogmatics, and the second that of apologetics or polemical theology. The first head may certainly be subdivided into theology (proper), anthropology, soteriology, and eschatology. Perhaps Christology (as far as it can be separated from exegetical work and soteriology) angelology, and finally ecclesiology (as far as it can be separated from the material facts of ecclesiastical organization on one side and from soteriology and Christology on the other) should be added.

The course in systematic theology is usually introduced by a general survey of the subject which it may be permitted to call encyclopædia. Occasionally this is made to bear upon the work of the student by pointing out methods that he should follow or aids that he should avail himself of, while pursuing his studies. Christian ethics also appears in the first year of the course, though it frequently comes among the studies of the third year. Frequently theology proper (the being and attributes of God) is begun during the first year, but the subject is always finished with the second. Closely connected with theology proper is the study of man, his spiritual nature and fall, called anthropology, and this leads naturally to soteriology or the doctrine of salvation, and that to eschatology. Sometimes all these several divisions of systematic theology are taken up and finished during the second year, but the rule is that eschatology comes in the third year, leaving anthropology and for the most part soteriology as the second or middle year subjects in this department. In addition to the headings already given the terms angelology and pneumatology occasionally occur and those of Christology and ecclesiology often, especially in the case of the former. In one institution the division of soteriology is composed of objective soteriology, which includes "the covenant of grace, Christology, the person, offices, work, and states of Christ," and subjective soteriology, which includes "The Holy Sprit, calling, regeneration, faith, etc." At another institution the subject of Christology is defined perhaps with perfect accuracy, as "Christ's Theanthropic person, divinity, and humanity." Ecclesiology may be said to be a third-year study.

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In the third year eschatology, ecclesiology, apologetics, and a general review of the studies of the course, figure prominently. In addition soteriology appears so frequently that it is doubtful whether it is not as much a third year as a second year study. Christian evidences comes frequently in the first year, though under the title of apologetics it is here included among the third year studies.

As in the schools of the Episcopal church there seems to be a variation, indicated either by the phraseology or by the text-book employed, from the usual curriculum of the department of theology, it seems advisable to insert a curriculum of one of the seminaries of that denomination. In selecting this illustration a curriculum has been taken that will not only exemplify sectarian as opposed to "nonsectarian" instruction, but also be of more general interest as showing the plan upon which the professor of divinity conducts the exercises of the department under his direction.

Systematic divinity.

In this department will be carried on two lines of study. In one, begun in the junior year and extending into the years following, under the direction of the assistant professor, the object will be:

First, to ascertain the Scriptural support for the received doctrine of the church;

Secondly, to trace the history and development of doctrine till it has reached its present form.

The text-books used will be namely: Pearson on the Creed; Brown on the Articles; Bruce on the Humiliation of Christ; Oxenham on Atonement; Mason's Faith of the Gospel; Martensen's Dogmatics; with partial study of Scott's Christian Life, Liddon's Bampton Lectures, Hooker's Ecclesiastical Polity, and Magee on Atonement.

It is not thought needful to mention here the many books of reference whose consultation is advised so far as there is time, unless it be Dorner on the Person of Christ, Pusey and Richey on the Filioque Clause, and Bull on Justification.

The second course, begun in the middle year and continued in the senior year will consist entirely of lectures by the professor of divinity, and its object will be to mould Christian doctrine into a coherent whole, giving it philosophic vindication by relating it to all truth. In this course will be read, parallel with the lectures, the professor's own work, "Christian Doctrine Harmonized, and its Absolute Rationality Vindicated."

In several institutions of another denomination it is customary to take a general and final review of the whole subject of theology in relation to the tenets of the denomination which supports the school. Thus in one school, during the latter part of the third year, a "special series of lectures will be delivered on the Westminister symbols, including the history of their formation, their doctrinal contents, and their influences and claims." In another seminary the subject of "Christian theology" is finished by a critical study in the Westminster confession as a final review of systematic theology; while at a third seminary of the same denomination the subject is broadened out during the second term of the final year into the subject of "symbolics," which deals with "comparative theology," being an exposition of the doctrinal differences between Romanism and Protestantism, and the variation of the protestant churches, and is treated from the denominational standpoint during the first term under the head of church polity.

The following syllabus will show, though with the mere accuracy of a numerical average, the type of the course in the department of theology; it may be added, however, that it seems exceptionally full on the subject of apologetics which here enters into the curriculum of two of the three years of the course, and is conducted by a specialist with the title of "Instructor in Apologetics."

Department of systematic theology.—Mr. Gillett, Junior Class, two hours per week during the first semester; Historic Apologetics, including both the Ecclesiastic and Christian divisions. Middle Class, three hours per week during the first semester: Philosophic Apologetics, including the Anthropic and Theistic divisions.

Professor Beardslee, Junior Class, two hours per week during the second semester: Theology proper, treating of the being and attributes of God, decrees, creation, providence, angelology, demonology, and theodicy Middle Class, four hours per week during the first semester: Anthropology, including Biblical psychology, man's original state and fall, hamartialogy, soteriology, including the person and work of Christ, and the application of redemption; three hours per week during the second semester, continuation of the same studies. Senior Class, two hours per week during the first semester: The work of the Holy Spirit, ecclesiology, eschatology, and inspiration; four hours per week during the second semester, Christian ethics. The entire course is pursued by means of an inductive study of the Bible, requiring constant individual investigation in the original languages, and in connection with each leading doctrine an examination of ecclesiastical theology from the sources.

CHURCH HISTORY.

The third great department of the theological course is the history of Judaism as precursory to Christianity and the history of Christianity. The department has several names—Ecclesiastical (or Church) History, Historical Theology, Biblical and Ecclesiastical History, History of Religion. Sometimes the term Church Polity is added to the name Ecclesiastical (or Church) History, and

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when this happens the combination may be taken as a definition of what is meant by historical theological.

Two types are shown by the courses of this department. One treats of the historic connection between Judaism and Christianity and of the apostolic age as the first period, the patristic and consolidating epochs as the second, and the epoch of protest or Reformation and the results as the third. But the more usual division is to make the point of departure for each period, (1) the beginning of our era, (2) the Council of Nicea, and (3) the Reformation. The treatment of Jewish history shows some variation. At one institution the "history and the religion" of that people is treated of in the junior year as Biblical Theology, while under the general head of "History," "Apostolical Christianity" is given, the professors in each branch being widely known as specialists in their respective departments; but not every institution can afford this wealth of instruction. The Old Testament has, in addition to its sacred, a historical character, but it is impossible to say how far the exegetical work in Hebrew brings out the history of the people of Israel. In one institution, at least, the Old Testament is studied as history "directly from the text," for two hours a week during the first semester of the junior year and three hours during the second semester.

As the occasional use of the term church polity in connection with church history indicates, and the logical development of the results of the reformation offers the occasion, the organization of the Roman Catholic and Protestant churches becomes a subject of examination and the examination is naturally made with relation to the particulars of the faith professed by the denomination to which each school pertains. In the foregoing we have found the Episcopalian Church introducing the study of its creed and articles of faith in the second year, but the study of the "confessions" or, to use the scholastic expression, the differentia of the beliefs held by the Christian peoples, is usually deferred until the final year in the department now under consideration. A pronounced instance of this is shown by the following course:

JUNIOR YEAR.

The Biblical Geography will occupy ten weeks of the first term, and the remainder of the year will be devoted to Sacred History, including both the Old and New Testament, and lectures on Biblical Archæology. This requires two hours per week in the recitation room.

MIDDLE YEAR.

History of the Christian Church from the Apostolic age to the present. This will include lectures on Patristics and the Councils. This is required three hours a week. Christian Biography and History of Special Churches are electives for one hour a week.

SENIOR YEAR.

History of Methodism will seek to give a general view of the origin, growth and work of the church. Weekly recitations will be held in History of Doctrines throughout the year. The History of Methodism, Comparative Symbolics of American Churches and Hymnology are required two hours a week. They will be taught by lectures in connection with a printed syllabus. Comparative Religions, Christian Art, and statistics of Religious Progress are elective two hours a week. Throughout the entire course students will be assigned subjects which they are to study in the library, and present these upon the same in the class. The aim from first to last is to lead the student as far as practical to depend upon his own careful study of the topics.

HOMILETICS AND PASTORAL THEOLOGY.

The fourth department of the theological course is practical and is usually called homiletics when dealing with the preparation of the sermon, and pastoral theology when it is concerned with the other practical work of the minister. It is the intention here to treat of both these as divisions of the department of practical theology. As a general introduction to the subject the following is taken from the catalogue of a theological department in a western university:

PRACTICAL THEOLOGY.

"The importance of the instruction of this department to young men proposing to enter upon the work of our ministry may be seen by reference to the fact that most young ministers are now required to begin their labors without the care and oversight once given by the senior preacher. Formerly the junior preacher was expected to engage for several years in acquiring the needful experience before assuming the management and responsibilities of a charge. But in these days, a young man upon leaving school is required to perform the full work of an experienced minister, with but the scant advice and direction of his presiding elder, as occasion may serve once or twice a year. The chair of practical theology is intended to supply by direct instruction that which was

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once furnished in some measure by the senior minister. The object is in part to teach the student how to put into practice that which he has mastered in the other departments of the school, especially that which relates to Christian character and conduct. Homiletics and pastoral theology will have a large place in the work of this department. Further, it is important to his interests and to the work as well, that he should become acquainted with the principles and law of our church, so as to wisely administer its discipline in the interest of the Gospel, and that he should be thoroughly acquainted with the great connectional plans and purposes of the church, so as to enter intelligently and enthusiastically upon the work of our ministry. During the first year, attention will be given to homiletics, pastoral theology, and preaching before the school. Lectures on the articles of religion, the discipline, constitution, and polity of the church will mainly occupy students of the second year. Questions of ecclesiastical law, courts of trial and appeal, church benevolences, and Sunday school and general church work will, during the third year, receive attention."

The study of homiletics is begun more frequently perhaps in the first than in the second year, and is, of course, accompanied by drill in elocution. The study is a special case of literary analysis, appreciation, and use, the models being found in sermons by eminent divines or much more frequently in compendiums on pulpit oratory or in the professorial or other criticism of the class room. In several cases lay rhetoric is studied. Extemporaneous work is, seemingly, accented and oral delivery of excogitated work insisted upon. The endeavor is to make the work as practical as possible, and in one instance the students are called upon to "participate in the conduct of a large children's [Sunday school] class led by the professor each week." So important is this subject of homiletics that one school speaks of "the paramount importance of the ministers' pulpit work.

The work in pastoral theology, though less brilliant, is certainly not less valuable. In the proper acceptation of the term it treats of the pastor as an agent and administrator rather than as an orator. But as the duties of these lines of activity require, if they are to be well performed, traits of a high order, the attributes desirable for the pastor to possess also receive great consideration. Occasionally church polity is included under this head. Sunday school and other religious agencies for recruiting the congregation, the conversion of the heathen in foreign parts, etc., also fall within its scope. The following courses will render further remark unnecessary:

Course of the theological department in a university of the South.

Homiletics and Pastoral Theology.

In the Trinity term the studies of the junior class seek to make clear such fundamental questions as what a pastor is? What are his relations toward God and toward man? What are his motives, responsibilities, and helps? What should be the main outline of his continuous and lifelong course of study? And what is the best method of preparation of sermons, whether unwritten or written? Distinctly to understand these questions is of highest importance, as well for its influence upon the student's devotedness and zeal, as for the advantage of applying homiletic theory to immediate practice in sermon writing and in preaching during his seminary life. Hence, these topics are placed at the beginning of the junior year, and that they may be perfectly understood they are taught in the threefold way of (*a*) the text-book and recitations; (*b*) printed lectures selected by the professor and read by the students in turn, and (*c*) the instructions of the professor. Then, throughout the remainder of the three years this knowledge is made use of in the writing of sermons, and in extemporaneous speaking, for which the Homiletical Society of St. Luke's Hall and the literary societies of the university furnish the opportunity at least once in every week.

In the senior year the studies are upon the administration of the sacraments, the performance of the occasional office of the Book of Common Prayer, and the practical detail of pastoral duty. Much attention is given to the reading of the service, and in particular to an accurate and intelligent reading of the lessons from Holy Scripture. The regular course of study in this department is supplemented by the able and instructive lectures of the right reverend the bishop of Louisiana.

Course of a seminary of the Middle States.

Department of Pastoral Theology.

I. *Church polity.*—The church; its membership, internal organization, external relations, officers, discipline.

II. *The ordinances.*—Their nature, efficacy, and obligation: baptism, its significance, form, and subjects; the Lord's Supper, its significance, and the qualifications for partaking of it.

III. *Pastoral duties.*—Call to the ministry; settlement; public worship; subject-matter of preaching; administration of ordinances; social religious meetings; pastor and Sunday school; the pastor as an organizer of the social and religious forces of the church; pastoral visitation; studies of a pastor; personal spirit and life.

Department of Homiletics.

The course in this department extends through two years. It furnishes stated exercises to secure, on the part of the student, a mastery of principles and methods, and to form in him

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correct habits in the preparation and delivery of sermons. These exercises consist of recitations from standard treatises, with lectures, elucidations, and criticism; carefully prepared analyses and written criticisms by the student of sermons by eminent preachers; presentation of plans of sermons before the class, with criticism by students and by the officer; and the preparation and delivery of sermons before the seminary, with criticism by students and officer.

In all cases of criticism before the classes and the seminary, in addition to the negative criticism to which the student is subjected, the professor holds himself responsible for an independe nt treatment of the text, or the subject, that the student may not be left conscious simply of his defects and errors, but may have suggested to him a method by which he may improve his own ideal and work.

Course of seminary in New England.

Department of Practical Theology.

Junior class, two hours per week during the first semester: Introduction to practical theology. The foundation for the whole course is laid by an expository study in the Gospels of the Lord's selection of His disciples, and of the personal training that he gave them in character, faith and methods of work. The first principles of the construction of the sermon are inductively drawn from the Biblical history of preaching. Constant practice in sermon analysis is required. Middle class, one hour per week during the first semester, four hours a week during the second: The study of Homiletics is completed, the practical exercise of making and delivering sermons is continued. Christian nurture, theoretical and practical, is also studied. Practice in preparing sermons, addresses, and class exercises for children, and participation in the conduct of a large children's class, led by the professor each week, supplement the study of theories. The history and methods of the Sunday school, Young People's Endeavor Societies, and Christian associations are objects of original research. A preliminary course in congregational polity is also given. Senior class, four hours per week throughout the year: The principles and methods of evangelistic work, pastoral care, Christian economics, and Christian benevolence, ecclesiastical polity and administration, and practical liturgics. One half the year is devoted the comparative study from the sources of Christian sociology. Preaching before the seminary is required. In all classes, besides the constant homiletic drill, practical personal work in Sunday school teaching, evangelistic efforts of many kinds, reformatory and preventive agencies, charity methods, and labor with individuals for their conversion and upbuilding are expected of each student under the supervision of the professor.

Course of a department in a college of the West.

Homiletics and Pastoral Theology.

Homiletics.—In the fall term, lectures five days a week for the first nine weeks, on homiletics, treating of the different classes of sermons, the principles of their construction, the use of texts, the nature and value of expository preaching, the method of preparation and production of the extemporaneous and the written sermon, the respective advantages which belong to each style of preaching, the homiletic habit, and the paramount importance of the minister's pulpit work. In connection with these lectures there are special exercises for the illustration and practical application of the principles of homiletics, consisting of the analysis of the sermons of eminent preachers, and the criticism of sermon plans presented by the different members of the class.

In the winter term the lectures are continued once a week upon the delivery of the sermon, the conditions of ministerial success, the ministerial spirit, the ministers theme, the method and range of the minister's studies, and the invention of thought for sermons.

In the spring term, the professor lectures five days a week for four weeks upon sacred rhetoric, discussing the properties of style adapted to the pulpit, the study, the characteristics of oral address, and the method of cultivating it. (Seventy-seven hours.)

Pastoral Theology elective.—Lectures five days a week throughout the term, treating of the following topics, viz: The conduct of public worship, Sunday schools, the pastor's special work for the children, the relation and the duty of the minister to missionary societies and other organizations for Christian work, the best method of educating and training a church to systematic beneficence, the advantages of a settled pastorate, prayer meetings, revivals, the instruction of religious inquirers and young converts, pastoral visiting, church organization, ministry to the sick, the afflicted, and the poor.

The members of the class, under the professor's direction, prepare to be read before the class during the year elaborate "studies in biography" of distinguished preachers, in which their special merits and methods of ministerial work are described and commented upon. (Seventy hours.)

Course of a seminary in the West.

Sacred Rhetoric and Pastoral Theology.

The work in this department begins with the junior year and extends throughout the entire course of study, enlarging as the student advances to graduation. For the fullest benefit it is indispensable that the drill and discipline cover three years.

A series of exercises in extempore expositions and explanations of scripture, or lecture-room talks, extends throughout the junior year; also, exercises in the reading of scriptures and of hymns.

A course of lectures on the sermon is given the middle class, together with a discussion of style as related to the literature of the pulpit. The preparation and criticism of sermon plans are also required. The lecture-room talks founded upon assigned passages of scripture are continued.

The senior class is given a course of lectures on preaching, embracing methods of preparation, delivery, etc. Critical exercises in sermon plans are continued throughout the year. Essays are also required from the seniors on topics closely related to this department. Preaching in chapel before all the students, and conducted by the members of the senior class in succession.

Lectures are also given in pastoral theology on the following and kindred topics. The pastor's personal character, habits, manner; the pastor in the study, in the prayer meeting, in the Bible school, in the homes of the people, in revival, in inquiry meeting, in the pulpit. This department covers, also, the call to the ministry and the choice of a field of labor.

Personal private drill in the reading of scripture and of hymns and in the delivery of sermons will be given by the professor to the seniors.

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PROGRAMMES AND TIME SCHEDULES OF SEVERAL SEMINARIES.[1]

CONNECTICUT.

HARTFORD THEOLOGICAL SEMINARY.

Summary of subjects and appointments.

	Junior year.		Middle year.		Senior year.	
	First seminary.	Second seminary.	First seminary.	Second seminary.	First seminary.	Second seminary.
Encyclopædia and methodology:						
Encyclopædia	1					
Methodology		1				
Exegetical theology:						
Old Testament	5	5	4			2
Hebrew sight reading				(1)		
Aramaic	(1)	(1)	(1)	(1)	(1)	(1)
Syriac	(1)	(1)	(1)	(1)		
Arabic						(1)
New Testament:	3	3	1	5	4	
Greek grammar	(1)	(1)				
Historical theology:						
Biblical history	3	4	2			2
Church history			2 [3]		4	4
Historical method			(1)	(1)		
Jewish history					(1)	(1)
Selected sources					(1)	(1)
Systematic theology:						
Apologetics	2		3			
Dogmatics and ethics		2	4	3	2	4
Experiential theology:						
General course						1
Biography	(1)		(1)		(1)	
Practical theology:						
Homiletics, pastoral care, and polity	2		1	5	4	4
Foreign missions						1
Music and liturgics		3		2	2	
Sight reading			(1)	(1)		
Elocution	2			2	1	1
Physical culture	4	4	4	4	4	4

Optionals are indicated by *italics* and parentheses ( ).

ILLINOIS.

WESTERN THEOLOGICAL SEMINARY.

Schedule of hours, 1889-90—(for the three higher classes.)

		Junior.	Middle.	Senior.
Tuesday	9 a. m.		Exegesis	Exegesis.
	10 a. m.	Preaching	Preaching	Preaching.
	11 a. m.	New Testament exegesis	Theology or Hebrew	Theology.
	12 m.	Theology or Hebrew		
Wednesday	9 a. m.	Greek (Patristic)	Theology or Hebrew	Theology.
	10 a. m.	Theology or Hebrew		Liturgics.
	11 a. m.	History, examination	History	History.
	12 m.	Psychology	Liturgics	
Thursday	9 a. m.		Exegesis	Exegesis.
	10 a. m.	New Testament exegesis	Theology or Hebrew	Theology.
	11 a. m.	Liturgics	History	History.
	12 m.		Moral Theology	Moral Theology.
Friday	9 a. m.	Psychology	Liturgics	
	10 a. m.	Greek (Patristic)	Theology or Hebrew	Theology.
	11 a. m.	Theology or Hebrew		Liturgics.
	12 m.	Meditation	Apologetics	Apologetics.
Saturday	9 a. m.	New Testament exegesis	Apologetics	Apologetics.
	10 a. m.	Theology		
	11 a. m.		Exegesis	Exegesis.
	12 m.	Liturgics	Theology or Hebrew	Theology.

[1] Several schools are not represented here, for the reason that their catalogues do not contain the time schedules.

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INDIANA.

THEOLOGICAL DEPARTMENT OF DE PAUW UNIVERSITY.

Daily routine of departmental exercises.

A.

	Junior class.	Middle class.	Senior class.
Old Testament:			
Required	11 a. m. Monday, Tuesday, Wednesday, and Friday.	8 a. m. Tuesday and Wednesday or 9 a. m. Tuesday and 10 a. m. Wednesday.	8 a. m. Thursday and Friday or 11 a. m. Thursday and 2 p. m. Friday.
Elective		11 a. m. Thursday and 2 p. m. Friday.	
New Testament:			
Required	9 a. m. Monday, Wednesday, and Thursday.	9 a. m. Monday, Wednesday, and Thursday.	9 a. m. Friday.
Elective		9 a. m. Friday	
Historical:			
Required	8 a. m. Thursday and Friday.	11 a. m. Monday, Tuesday, and Wednesday.	10 a. m. Monday and Tuesday.
Elective		3 p. m. Monday	10 a. m. Thursday and Friday.
Systematic:			
Required	10 a. m. Monday and Tuesday.	10 a. m. Thursday and Friday.	11 a. m. Tuesday and Wednesday.
Elective			11 a. m. Monday and Friday.
Practical:			
Required	11 a. m. Thursday and 2 p. m. Friday.	8 a. m. Thursday and Friday.	2 p. m. Monday and Tuesday.
Elective			2 p. m. Wednesday and Thursday.

Introductory classes: Greek lessons, 9 a. m. Monday, Wednesday, Thursday, and Friday; Psychology, 2 p. m. Wednesday and Thursday.

B.

	Junior class.	Middle class.		Senior class.	
	Required.	Required.	Elective.	Required.	Elective.
Old Testament theology	4	2	2	2	------
New Testament theology	3	3	1	1	------
Historical theology	2	3	1	2	2
Systematic theology	2	2	------	2	2
Practical theology	2	2	------	2	2
Total per week	13	12	4	9	6

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KENTUCKY.

SOUTHERN BAPTIST THEOLOGICAL SEMINARY.

Scheme of lectures.

(Subject to alterations at the beginning of every session.)

Hour.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
8.30 a. m.	.....	Gk. Sr	Pol	Gk. Sr	Pol	Gk. Sr.
9.30 a. m.	.....	N. T.....	O. T	N. T.....	O. T	N. T.
10.30 a. m.	.....	Ec. Hist.....	Ec. Hist.....	Ec. Hist....	Ec. Hist....	Ec. Hist.
11.30 a. m.	Gk. Jr., Heb. Sr.	Heb. Jr	Gk. Jr., Heb. Sr.	Heb. Jr	Gk. Jr., Heb. Sr.	Heb. Jr.
12.30 p. m.	O. T	Bib. Int'.....	Hom	Bib. Int	Hom	Bib. Int.
3.00 p. m.	.....	Pol	.....	Hom. Eloc .	.....	
4.00 p. m.	Hom	Eng. Th.....	Eng. Th.....	Eng. Th....	Eng. Th....	
5.00 p. m.	Ch. Gov. and P. D.	Lat. Th	Ch. Gov. and P. D.	Lat. Th	Ch. Gov. and P. D.	

MASSACHUSETTS.

HARVARD DIVINITY SCHOOL.

Tabular view of the exercises. (*The Roman numeral in parenthesis indicates the examination group to which the course belongs.*)

Monday.—10 to 11 a. m., New Testament (2); 11 to 12 m., Theology (3) and New Testament (4); 2 to 3 p. m., History of Israel; 3 to 4 p. m., Hebrew (1) and Homiletics (2).

Tuesday.—9 to 10 a. m., Theolgy (2); 10 to 11 a. m., Ethics and Homiletics (2) (*private criticisms*); 11 a. m. to 12 m., Aramaic; 12 m. to 1 p. m., New Testament (5); 2 to 3 p. m., Old Testament introduction; 3 to 4 p. m., Hebrew (2).

Wednesday.—9 to 10 a. m., New Testament (1*a*); New Testament (3*b*); Church history (3); 10 to 11 a. m., Theology (1); 11 a. m. to 12 m., Theology (3); 12 m. to 1 p. m., New Testament (2); 2 to 3 p. m., History of Israel; 3 to 4 p. m., Hebrew (1).

Thursday.—9 to 10 a. m., Comparative religion; 10 to 11 a. m., Ethics; 11 a. m. to 12 m., Aramaic; 12 m. to 1 p. m., New Testament (4); 2 to 3 p. m., Old Testament introduction; 3 to 4 p. m., Hebrew (2).

Friday.—9 to 10 a. m., New Testament (1*a*); New Testament (3*b*); Church history (3); 10 to 11 a. m., Homiletics (1); 11 a. m. to 12 m., Theology (3); 12 m. to 1 p. m., Homiletics (4*b*); New Testament (5); 2 to 3 p. m., Religion of Israel; 3 to 4 p. m., Hebrew (1); Religion of Israel.

Saturday.—9 to 10 a. m., Comparative religion.

NEW YORK.

HAMILTON THEOLOGICAL SEMINARY.

(*Figures in parenthesis indicate number of recitations.*)

Junior Year.

Old Testament.—First and second terms, Hebrew grammar (3); Isagogics (2); third term, Hermenutics (2); Historical books (3).

New Testament.—First half year (Greek section), Translation and exegesis of the Gospels (3); (whole class), Hermeneutics and introduction (2); second half year (Greek section), selections from Pauline Epistles (2); (whole class), Introduction to Pauline epistles (2).

Biblical Greek.—First term, Grammar and Grammatical study of the Fourth Gospel (4), Old Testament history (2); second term, Grammatical study of Pauline epistles (4), History of the Commonwealth of the Restoration (2); third term. study of Old Testament Apocrypha (1); Grammatical study of Petrine Epistles (4). New Testament history (2).

Church History.—Through the year, Ancient period (3).

Middle Year.

Old Testament.—First term (Assyrian); second term, Prosody and the Psalms (4), (Assyrian); third term, Prophecy and the Prophetical Books (4), (Syriac).

New Testament.—First term (English section), Romans (4); second term, (Greek section), Catholic epistles and Revelation (4); third term (English section), Hebrews (4).

Biblical Greek.—Through the year translation and study of selections from the Septugint version (1); third term. (Textual criticism of the Greek Bible).

Church History.—First term Ancient and Mediæval Periods (3); second term, Mediæval and Reformation periods (3).

Homiletics.—First term Principles of Homiletics (4); second and third terms, Criticisms of selections and sermons (4).

Senior Year.

Old Testament.—First term Christology and Christological passages (4), (Chaldee); through the year (Arabic).

New Testament.—See middle year. Next year, both classes: First term (Greek section), Rommans (4); second term, (English section), Catholic Epistles (4); third term (Greek section), Hebrews (4).

a First half-year. *b* Second half-year.

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Church History.—First term, Reformation and Modern periods (2.)
Homiletics.—Second and third terms, Preaching before the Seminary, with Criticism (2).
Pastoral Theology.—First and second terms Constitution of the Church; the ordinances, pastoral duties (2).
Christian Theology.—First term Introduction; Theology; Anthropology (4); second term, Christology; Pneumatology (4); third term, Eschatology; Christian ethics (4).

Schedule of the hours of recitation.

	Junior class.	Middle class.	Senior class.
9 a. m	Dr. Harvey, Greek (3); Dr. Harvey (2) and Prof. Schmidt, History (2).	Dr. Maynard (3), Prof. Schmidt, Greek (1).	Dr. Dodge (4), Christian theology.
10 a. m	Prof. Schmidt, Hebrew (3), terms 1 and 2.	Dr. Harvey and Dr. Burnham, alternately (4).	Dr. Harvey and Dr. Burnham, alternately, (4).
11 a. m	Dr. Burnham, Hebrew (3), term 3.	Dr. Beebee (4), Homiletics.	Dr. Beebee (2), terms 2 and 3; Dr. Harvey (2), terms 1 and 2, and Dr. Maynard (2), term 1.
2:30 p. m	Prof. Schmidt, Greek (4).	Syriac (4), term 3, Dr. Burnham.	Chaldee (4), term 1, Dr. Burnham.
3:30 p. m	Dr. Burnham (2) and Dr. Maynard (3), History.	Assyrian (1) Tuesday, Prof. Schmidt; English Old Testament (2), Wednesday and Friday, Dr. Burnham.	Arabic (1), Friday, Prof. Schmidt.
4:30 p. m	Old Testament Apocrypha (1), Wednesday, Prof. Schmidt.	Old Testament History (1), Friday, Dr. Burnham; Textual criticism (1) Thursday, Prof. Schmidt.	Historical criticism studies (1), Tuesday, Dr. Burnham.

UNION THEOLOGICAL SEMINARY.

Schedule of lectures for 1889-90, second term.

Days.	Hours.	Juniors.	Middlers.	Seniors.
Monday	11 a. m.	Prof. Prentiss.[1]	Prof. Schaff.	
	3 p. m.	Prof. Brown.[2]	Prof. Shedd.[6]	Prof. Schaff.
	4 p. m.		Conference meeting.	
Tuesday	11 a. m.	Prof. Brown.	Prof. Schaff.	Prof. Hastings.
	3 p. m.	Prof. Vincent.[3]	Prof. Briggs.	
	4 p. m.	Prof. Briggs.[4]	Prof. Shedd.	Prof. Vincent.
Wednesday	11 a. m.	Prof. Brown.	Prof. Briggs.	Prof. Prentiss.
	3 p. m.	Prof. Schaff.[5]	Prof. Shedd.	Prof. Hastings.
	4 p. m.	Prof. Vincent.	Prof. Briggs.	Prof. Shedd.
Thursday	11 a. m.	Prof. Prentiss.	Prof. Hastings.[7]	Prof. Schaff.
	3 p. m.	Prof. Brown.	Prof. Vincent.	Prof. Briggs.
	4 p. m.	Prof. Briggs.	Prof. Shedd.	Prof. Vincent.
Friday	11 a. m.	Prof. Schaff.	Prof. Hastings.	Prof. Prentiss.
	3 p. m.	Prof. Brown.	Prof. Vincent.	Prof. Briggs.
	4 p. m.	Prof. Vincent.	Prof. Briggs.	Prof. Shedd.

Private criticism of sermons, seniors, Tuesdays, Thursdays, and Fridays, 1.30 to 2.30 p. m. with Prof. Hastings.
Class in Syriac, Tuesdays, 2 to 3 p. m., with Prof. Briggs.
Class in Biblical Aramaic, Tuesdays, 2 to 3 p. m., with Prof. Brown.
Class in Assyrian I., Mondays, 2 to 3 p. m., with Prof. Brown.
Class in Assyrian II., Wednesdays, 10 to 11 a. m., with Prof. Brown.
Advanced class in Hebrew, Thursdays and Fridays, 2 to 3 p. m., with Prof. Brown.
Vocal culture, middlers individually, juniors in sections, daily, 9 to 11 a. m., with Prof. Roberts.
Sacred music, choir drill, Mondays, 5.15 p. m.; classes, Thursdays, 7.30 p. m., with Prof. Herman.

[1] Chair of Pastoral Theology, Church Polity, and Mission Work.
[2] Associate Professor in Department of Biblical Philology.
[3] Chair of Sacred Literature.
[4] Chair of Hebrew and Cognate Languages.
[5] Chair of Church History.
[6] Chair of Systematic Theology.
[7] President and Chair of Sacred Lhetoric.

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Schedule of lectures for 1890-91. First term.

Days.	Hours.	Juniors.	Middlers.	Seniors.
Monday	11 a. m.	Prof. Prentiss	Prof. Schaff	
	3 p. m.	Prof. Brown	Prof. Shedd	Prof. Schaff.
	4 p. m.		Conference meeting	
Tuesday	11 a. m.	Prof. Prentiss	Prof. Schaff	Prof. Hastings.
	3 p. m.	Prof. Brown	Prof. Briggs	
	4 p. m.	Prof. Vincent	Prof. Shedd	Prof. Briggs.
Wednesday	11 a. m.	Prof. Briggs	Prof. Prentiss	Prof. Brown.
	3 p. m.	Prof. Brown	Prof. Vincent	Prof. Hastings.
	4 p. m.	Prof. Vincent	Prof. Shedd	Prof. Briggs.
Thursday	11 a. m.	do	Prof. Prentiss	Prof. Schaff.
	3 p. m.	Prof. Brown	Prof. Briggs	Prof. Shedd.
	4 p. m.	Prof. Briggs	Prof. Shedd	Prof. Brown.
Friday	11 a. m.	Prof. Schaff	Prof. Hastings	Prof. Prentiss.
	3 p. m.	Prof. Brown	Prof. Vincent	Prof. Briggs.
	4 p. m.	Prof. Vincent	Prof. Briggs	Prof. Shedd.

Private criticism of sermons, seniors, Tuesdays and Thursdays, 1.30 to 2.30 p. m., with Prof. Hastings.

Class in Arabic, Wednesdays, 10 to 11 a. m., with Prof. Briggs.

Class in Assyrian II, Tuesdays, 2 to 3 p. m., with Prof. Brown.

Advanced class in Hebrew, Mondays, Thursdays, and Fridays, 2 to 3 p. m., with Prof. Brown.

Vocal culture, seniors individually, middlers in sections, daily, 9 to 11 a. m., with Prof. Roberts.

Sacred music, choir drill, Mondays, 5.15 p. m.; classes, Thursdays, 7.30 p. m., with Prof. Herman.

EXAMINATIONS.

The academic year consists of two terms, the first beginning with the third Wednesday of September and ending with the Christmas holidays: the second beginning immediately after those holidays and ending with the Tuesday next preceding the second Thursday of May. Examinations will be held during the last week of each term upon the studies then completed. These examinations are conducted by the faculty with the coöperation of committees of the directors. The Presbytery of New York is represented by a committee at the intermediate examination, the Synod of New York at the final examination.

VIRGINIA.

THEOLOGICAL SEMINARY OF THE DIOCESE OF VIRGINIA.

Scheme of lectures.[1]

Monday.—9 to 10 a. m., middle class theology, junior Greek; 10 to 11 a. m., senior history, middle class Hebrew; 11 a. m. to 12 m., junior Hebrew; 12 m. to 1 p. m., middle class English, Bible; 1 to 2 p. m., senior class polity, junior history.

Tuesday.—9 to 10 a. m., senior Hebrew, middle class history; 10 to 11 a. m., middle class theology, junior Hebrew; 11 a. m. to 12 m., senior class polity, junior class natural theology; 12 m. to 1 p. m., senior English Bible, middle class Greek; 1 to 2 p. m., junior history.

Wednesday.—9 to 10 a. m., senior history, junior Greek; 10 to 11 a. m., senior Greek, middle class theology; 11 a. m. to 12 m., junior apologetics; 12 m. to 1 p. m.,[2] senior theology (homiletics), middle class Hebrew; 1 to 2 p. m., junior history; 5 p. m., exercises in homiletics and the use of the prayer book which all the students are required to attend.

Thursday.—9 to 10 a. m., senior Greek, middle class history; 10 to 11 a. m., middle class theology, junior Hebrew; 11 a. m. to 12 m., senior Hebrew; 12 m. to 1 p. m., senior theology, middle class Greek; 1 to 2 p. m., junior history.

Friday.—9 to 10 a. m., senior Greek, middle class history; 10 to 11 a. m.,[3] senior history (canon law), middle class theology, junior Hebrew; 11 a. m. to 12 m., junior apologetics; 12 m. to 1 p. m., senior theology, middle class English Bible.

TEXT BOOKS.

The necessary information is not possessed by this Bureau to enable it to discuss the subject of text books with any degree of thoroughness. The following scheme will show very succinctly a peculiarity of the catalogues of the schools of the Episcopal Church, to wit: The text and reference books are invariably

[1] In order that the main outlines of the curriculum may be presented clearly, some of the briefer courses, which occupy only a fraction of a session, and the exercises in elocution are not noted in this scheme.

[2] For half the session this hour is given to homiletics; but throughout the whole session exercises are given in analyzing texts and constructing sermons.

[3] This hour is given to canon law during the latter part of the session.

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mentioned. To compare with it a programme of the Mount St. Mary's Ecclesiastical Seminary (Roman Catholic), and another of the Augustana Theological Seminary (Lutheran) are inserted:

Scheme of study.

Studies.	Junior year.	Middle year.	Senior year.
Hebrew and Greek.	Tregelles' Heads of Hebrew Grammar. Readings from the Pentateuch and the Psalms. Gesenius' Hebrew Lexicon. Readings from the Septuagint.	Readings from the Messianic Psalms, and Extracts from the Prophets. Gesenius' Hebrew Lexicon.	
Exegesis	The four gospels; the Acts of the Apostles. Gardiner's Harmony of the Gospels.	The Epistles of St. Paul, with Ellicott's and Lightfoot's Commentaries.	Christological portions of the Old Testament in Hebrew, with Commentaries.
Ecclesiastical history.	First six centuries: Mahan, Blunt, Burton and Robertson's Church Histories. Bates' Lectures on Christian Antiquities. Mosheim's Commentaries.	Seventh to fifteenth centuries, inclusive: Hammond on the canons. Newman's History of the Arians. Hardwick's Middle Ages. Robertson's Church History, 3d ed. Milman's Latin Christianity.	Sixteenth century to present time: Hardwick's Reformation. Burnet's History of the English Reformation. Carwithen's and Perry's Histories of the English Church. Perry's and Wilberforce's Histories of the American Church.
Systematic divinity	Bishop Butler's Sermons at the Rolls. Christian Ethics. Adams' Elements of Christian Science. Lectures by the Professor.	Pearson on the Creed. Hooker on the Incarnation.	Bishop Browne on the Thirty-nine Articles.
Pastoral theology	Gresley's Ecclesiastes Anglicanus, Amer. ed. Brooks' Lectures on Preaching. Bishop Ellicott's Collections on Homiletics. Lectures on Homiletics, by the Professor. Four sermons by each student.	Blunt's Parish Priest. Bishop Burnet on Pastoral Care. Bishops White and Wilberforce on the Ordinal. Bishop Ellicott's Collections on Pastoral Work. Lectures on Pastoral Duties, by the Professor. Five Sermons by each student.	Wheatley and Procter on the Book of Common Prayer. Hooker's Ecclesiastical Polity, Book *vs.* Lectures on Liturgics and Pastoral Work, Conscience and Human Law, by the Professor. Six Sermons by each student.
Ecclesiastical polity and law.		Abp. Potter on Church Government. Wordsworth's Outlines of the Christian Ministry. Lectures by the Professor.	Haddan's Apostolical Succession. Canons and other Ecclesiastical Laws. Lectures by the Professor, with Exercises on books of reference.

MOUNT ST. MARY'S ECCLESIASTICAL SEMINARY.

Cursus theologicus quatuor annos complectitur.[1]

Auctores vero qui in scholis adhibentur sunt sequentes.

Theologia Dogmatica: Jungmann et Schouppe.

Theologia Moralis: Gury-Ballerini. Ad consulendum, Lehmkuhl.

Introductio in Sacram Scripturam: Ubaldi.

Introductio Critica Hermeneutica Biblica et Archæologia Biblica. Commentarii: Piconius et Estius.

Historia Ecclesiastica: Wouter.

Jus Canonicum: Soglia-Vecchiotti.

Sacra Eloquentia: Potter.

Liturgia Sacra: De Herdt, O'Brien et O'Kane

Lingua Hebraica: Vosen.

Cantus Planus: Magister Choralis.

[1] The programme is prefaced by the following statement as to admission:

Nemo in Seminarium admittetur nisi studia ad classes optatas præparatoria jam sufficienter excoluerit, quod per examen constare debebit. Ante omnia autem literas testimoniales ab Instituto cui forte fuerit adscriptus, necnon a proprio parocho vel alio superiore ecclesiastico secum portare tenebitur.

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AUGUSTANA THEOLOGICAL SEMINARY.

Text-books and books recommended.

EXEGETICAL THEOLOGY.

1. Weidner's Theological Encyclopædia, vol. 1.
2. Harper's Introd. Hebrew Method and Manual.
3. Harper's Elements of Hebrew.
4. Mitchell-Gesenius' Hebrew Grammar.
5. Harper's Elements of Hebrew Syntax.
6. Davies' Hebrew Lexicon.
7. Theile's or Hahn's Biblical Hebraica.
1. Harper-Weidner's Introd. N. T. Greek Method.
2. Westcott Hort's Greek Testament.
3. Boise's Notes on the Greek Text of St. Paul's Epistles.
4. Bengel's Gnomon.
5. Thayer's Lexicon of the N. T.
6. Weidner's Commentary on Mark.
7. Rosenius' Isagogics.
8. Hasselquist's Ephesians.
9. Melin's Notes on the Bible.
10. Weidner's Studies in the Book.
11. Cornelius' Theologiska Prænotioner.

HISTORICAL THEOLOGY.

1. Kurtz's Sacred History.
2. Weidner's Biblical Theology of O. T.
3. Cornelius' Handbook i Kyrkohistorien.
4. Kurtz's Church History.
5. Schéele's Lärobok i Theologisk Sombolik.

HISTORICAL THEOLOGY—Continued.

6. Günther's Symbolik.
7. Graul's Skiljeläror.
8. Weidner's Theological Encyclopædia, vol. II.
9. Billing's Lutherska Kyrkans Bekännelse.

SYSTEMATIC THEOLOGY.

1. Luthardt's Kompendium der Dogmatik.
2. Bring's Grunddragen af den Christliga Troslären.
3. Blörling's Christliga Dogmatiken.
4. Norbeck's Lärobok i Theologien.
5. Schmid's Doctrinal Theol. of the Evang. Luth. Church.
6. Weidner's Introduction to Dogmatic Theology.
7. Martensen's Kristliga Ethik.

PRACTICAL THEOLOGY.

1. Baur's Homiletics.
2. Ullman's Liturgics.
3. Scheele's Catechetics.
4. Norrby's Pastoral Theology.
5. Horn's Evangelical Pastor.
6. Palmer's Catechetics.
7. Kubel's Pastoral Theologie.
8. Holmström's Kyrkorättslära.

CHANGES DURING THE DECADE 1880-90.

ELECTIVES.

Before speaking on this, in college history, well-worn question, let us distinguish between a special or nondegree course in a theological school and a course composed of a certain number of studies chosen by the students from among a category of subjects offered by the faculty in lieu of an invariable curriculum. To state the question thus is to answer it. The special courses for ministers or for others who seek to extend their acquirements in languages will be spoken of under the head of optional studies.

In 1885, the Theological Department of Oberlin College introduced the elective system for one-half of the course for B. D. For this degree students were required to complete work amounting to 1,050 hours of lectures. The required studies demanded 485 hours, the elective studies might extend to 1,252 hours, but 565 hours were required. At present the daily exercises are as follows:

Hour.	Fall term.	Winter term.	Spring term.
8 to 9 a. m	Hebrew, a. (70); *church history, a.* (70).	Hebrew, b. (60); *church history, a.* (60).	Hebrew, c. (40); church history, b. (40).
9 to 10 a. m	*Elocution;* Hebrew, d. (70).	New Testament, b. (60); Homiletics, b. (60).	Church history, c. (40); Semitic or Septuagint (40); New Testament, c. (25).
10 to 11 a. m	*Natural theology,* (45); *revealed theology,* (25); *Homiletics, a.* (45).	*Greek, a.* (60); *revealed theology* (48); *homiletics, a.* (12).	*Natural theology* (15); *modern skepticism* (20); *science and religion* (20).
11 a. m. to 12 m.	*Greek, a.* (25); pastoral theology (70).	*Elocution;* history of doctrine.	*Homiletics, a.* (20); positive institutions (20); *Greek, a.* (40).
4 to 5 p. m	----------	Old Testament introduction and theology (48).	Homiletics, c. (20).

The courses printed in *italics* are required studies; the others are elective. The required courses amount to 628 hours; the elective courses offered in three years amount to 1,250 hours. For the degree of B. D., students must have completed work amounting to 1,133 hours of lec-

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tures upon this system. The studies of the several departments may be pursued in such order as is necessary to secure the desired electives; but continuous courses, such as church history a, or homiletics a, should never be interrupted until completed.[1]

The study of Syriac in the second year and the study of Chaldee in the third year were elective in the Hamilton Theological Seminary as early as 1885, they being optional studies at the date of 1881. In this institution the student may pursue a "full course" or a "Greek-English course" (which dispenses with Hebrew and begins the study of Greek) or an "English course" (which dispenses with both Hebrew and Greek).

About 1886 or 1887 "electives" were introduced in the Newton Theological Institution, the prescribed studies requiring from 9 to 10 hours a week. Most of the elective courses being open to more than one class, they are not arranged according to classes, but according to the term in which they are given. No elective course is begun unless there is an attendance of four or more students. In the first term the electives are the Semitic languages, including Assyrian and Biblical Greek, exegetical work in Old and New Testament apologetics, Christian theology according to John, inspiration, comparative religion and history of missions, and preaching and methods—14 courses in all of 1 or 2 hours a week, some open to all students, others open only to the middle and senior classes. The second term, for it appears that each course only continues one term, is very similar to the first in character, being, it would seem, a sort of continuation of the first term, though the courses of both terms are numbered consecutively from 1 to 30, course 15 being the first course of the second term. A peculiarity of the courses of the second term is indicated by expressions such as this "Course 15, 1891, and every third year Old Testament history; Course 17, 1889 and 1891, rapid reading of Hebrew Testament."

From the dean of Harvard it is learned that during the decade "the studies have gradually changed in the way of enlargement, the elective system having been introduced to some extent," while the acting warden of the Seabury Divinity School informs the Bureau that "We hope soon to introduce the elective system," and that "the German seminary system is increasing in favor." This seminary system is in vogue at Harvard; and perhaps elsewhere, without designation as such.[2]

With the year 1890–91 the system of elective studies will be introduced in the Andover Theological Seminary in order to encourage a degree of specialization and to offer an increased number of subjects, particularly in Biblical studies. While the study of theology is in itself an election, says the faculty, and necessarily includes foundation work in Hebrew, Greek, dogmatics, church history, homiletics, and other branches of sacred learning, there may properly be opportunity for more extended research in one or another of the principal departments, and in accordance with the tastes and aptitudes of the students. The amount of prescribed work by lecture hours is therefore somewhat reduced in the middle and senior years, and several courses are offered from which a required number of hours is to be chosen. All the elective courses of each year are offered to both classes, and entirely different courses are offered in alternate years. A sufficient number shall be chosen to make, with prescribed studies, an average of 12 hours a week in the middle and 10 in the senior year. Old Testament studies include the three courses of introduction, exegesis, and Biblical

[1] The following course is recommended by the faculty for the general student:

	Fall term.	Winter term.	Spring term.
Junior year	8 to 9 a. m., Hebrew, a.; 9 to 10 a. m., *elocution;* 10 to 11 a. m., *natural theology; Greek, a.*	8 to 9 a. m., Hebrew, b.; 9 to 10 a. m., *elocution;* 10 to 11 a. m., *Greek, a.*	8 to 9 a. m., Hebrew, c.; 10 to 11 a. m., *natural theology;* 11 a. m. to 12 m., *Greek, a.*
Middle year	10 to 11 a. m., *revealed theology; homiletics, a.;* 11 a. m. to 12 m., Old Testament, d.	10 to 11 a. m., *revealed theology, b.; homiletics, a.;* 11 a. m. to 12 m., New Testament, b.	9 to 10 a. m., Semitic, or New Testament, c.; 11 to 12 m., pos. institutions; *homiletics, a.*
Senior year	8 to 9 a. m., *church history, a.;* 9 to 10 a. m., pastoral theology.	8 to 9 a. m., *church history, a.;* 11 a. m. to 12 m., homiletics, b.	8 to 9 a. m., church history, b.; 10 to 11 a. m., *science, religion, modern skepticism.*

[2] As, for instance, at the Chicago Theological Seminary, where the professor of church history conducts a "Historical Society," in which he reads with the students of all classes who may desire it selections from patristic works, *e. g.* First Apology of Justin Martyr.

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theology. New Testament studies include the three courses of introduction, exegesis, and the life of Christ. Courses are offered also in social economics, Christian ethics, and the philosophy of religion.

A feature of the Southern Baptist Theological Seminary requires notice. The plan of instruction is quite similar to that of the University of Virginia. Every department of study is elective, and a separate degree is given upon graduating in each department; and the degree of "full graduate" when all have been completed or "English graduate" when all, except Hebrew and Greek. Many students remain only one year, others two, electing certain departments at pleasure, with advice of the professors. "We are satisfied from thirty years of experience," says Dr. Broadus, "that the elective works best when complete and consistent."

OPTIONAL STUDIES.

The optional studies of the theological seminaries are languages and those special courses of individual or collective inquiry and mutual criticism that are called seminariums, or, to use the Latin form, seminaria. An illustration of this seminarium may be found in the case of the Lane Theological Seminary, which has as an optional course a "special class for the study and criticism of the literary sources of ancient church history," once a week throughout the year, the chief subject of investigation during 1889-90 being the formation of the New Testament canon.

But the great optionals are the Semitic languages, the Egyptian hieroglyphics, and perhaps the German language, which shows some indications of becoming as much the language of Protestant theology as Latin is of the Roman Catholic. At Yale it is noted that Sanscrit may be studied under Prof. Whitney, of the college proper. Of the twelve or thirteen schools reporting optional courses in the languages with which Hebrew is cognate but two mention in addition the study of the hieroglyphics. One of these, the Theological Seminary of the Dutch Reform Church, offers in each of its three years a course in Coptic or Hieroglyphic, while the other, the theological seminary at Andover, Mass., offers instruction to the middle and senior classes in Egyptology, including the elements of the hieroglyphs, or in Assyriology. The course of the schools then, taking them altogether, is well confined to the languages of the Semitic group, with a preference for the northern branch, as might be expected from the religious literature its languages contain, though the study of the ancient or Biblical Hebrew should not be classed among the optional studies of our seminaries.

The following statements will illustrate various phases of the course of instruction in the optional languages:

1.—*As to organization of the classes.*

THE COGNATE ORIENTAL LANGUAGES AT UNION THEOLOGICAL SEMINARY.

(See page 933 for time table.)

All the studies in this department are optional.

The class in Biblical Aramaic will study the grammar of that language with selections from the Aramaic of the Bible, in the second term, with Prof. Brown.

Those who have already studied Hebrew and Biblical Aramaic may unite with the Syriac and Arabic classes, which are organized in alternate years (1889-90, Syriac; 1890-91, Arabic), so that in regular order the three classes may pursue Biblical Aramaic, Syriac, and Arabic. The Syriac class will study Syriac grammar, and read selections from the Peshitto version in the first term, and read selections from Bar-Hebraeus and Ephraem Syrus in the second term with Prof. Briggs. The Arabic class will study the Arabic grammar, and read selections from the version of Saadia in the first term, and read selections from the Koran, in connection with a more particular study of Arabic syntax, in the second term with Prof. Briggs.

There will be two Assyrian classes, composed of those who have already studied Hebrew, and two of the Cognates. The one will study the Assyrian characters and grammar, and read selections from the historical inscriptions during the second term with Prof. Brown. The second class will consist of those who have already passed through the first class. They will read selections from the historical and mythological inscriptions and the syllabaries. Lectures will also be given on Babylonian and Assyrian literature, and on the history of the Assyrian language and the cuneiform signs. This course will be extended through both terms with Prof. Brown.

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2.—*As to character of course offered.*

DEPARTMENT OF SEMITIC LANGUAGES AND OLD TESTAMENT EXEGESIS OF HAMILTON THEOLOGICAL SEMINARY.

SEMITIC LANGUAGES.

First year.

1. Hebrew:
   (1) Grammar, with practical exercises.
   (2) The prose accents and accentuation.
   (3) Translation and study of selections from the historical books.
2. Elements of comparative Semitic philology.

Second year.

1. Hebrew:
   (1) Prosody, with practical exercises.
   (2) Poetic accentuation.
   (3) Translation and study of selections from the poetical books.
2. Syriac (elective):
   (1) Grammar, with practical exercises.
   (2) Translation and study of selections from the Peshitto Old Testament.
   (3) Translation and study of selections from historians and commentators.
3. Assyrian (optional):
   (1) Grammar, with practical exercises.
   (2) Translation and study of transliterated texts.
   (3) Translation and study of cuneiform texts.

Third year.

1. Hebrew: Reviews.
2. "Chaldee" (elective):
   (1) Grammar, with practical exercises.
   (2) Translation and study of selections from the Targums.
   (3) Translation and study of Biblical "Chaldee."
3. Syriac (optional):
   (1) Translation and study of selections from the Peschitto New Testament.
   (2) Translation and study of selections in verse.
4. Assyrian (optional):
   Translation and study of cuneiform texts.
5. Arabic (optional):
   (1) Grammar, with practical exercises.
   (2) Translation and study of selections from the Koran and the Arabic Bible.
   (3) Translation and study of selections from the poets.
6. Comparative Semitic philology and grammar (optional).

To illustrate the intermitting system of the elective course the work at Oberlin Theological Seminary is given:

Comparative Semitic and Septuagint Greek.—In 1890, and every second year, a class will be formed in the Greek of the Septuagint with special reference to the influence of the vocabulary and grammar of that important version upon the New Testament Greek. In 1891, and every second year, a class will make a beginning in comparative Semitic grammar by reading comparatively the first four chapters of Genesis in Hebrew, Aramaic, Syriac, and Arabic; 40 hours.

At the Southern Baptist Theological Seminary, whose peculiarity of independence of schools has been noted, twelve collateral studies, previously irregularly pursued in private classes, have been organized into definite specialties for resident or under-graduates. The first four of these schools deal with Arabic, Aramaic, Assyrian, and the Coptic languages, but it is of the sixth, the eighth, and the twelfth that mention is made here. The sixth course is in Patristic Greek, and during the year "The Teaching of the Twelve Apostles" and portions of Justin Martyr, etc., were read. The eighth course is in Patristic and scholastic Latin, with readings in Tertullian, Augustine, Bede's History, and the Imitation of Christ. The twelfth course deals with German, as is shown by the following:

Theological German.—The importance of the German language is appreciated by numbers of students in theology. A special class has been regularly organized for beginners; advanced students who shall prosecute with the professor a course of reading in German works of exegesis, church history, systematic or practical theology, will in the future be entitled to a diploma for attainments in this course. The junior class for the present year has mastered the forms and read considerably in the New Testament. The senior class has read largely in the Old Testament.

At the School of Theology of Boston University Spanish is an optional study for those intending to labor among Spanish-American populations. The instruction is given in this as in a number of other studies in the College of Liberal Arts of the University. The same advantages are offered at Yale and other seminaries which are university departments.

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POST GRADUATE COURSES.

Postgraduate work is individual, and when such students are congregated into classes their work is but the work of the seminarium. A fourth year of work was established at the Andover Seminary as early as 1858, but only survived for a short period. In 1881 it was again established and on a firm basis.

FOREIGN DEPARTMENTS.

When George Primrose, the son of Goldsmith's Vicar of Wakefield, went to Holland to teach the natives English he found his purpose frustrated by his inability to speak Dutch. It has long been found necessary to teach the missionary to the Indian the language of those among whom he is to labor and even to send out native preachers, and quite an effort has been made by several schools during the last decade to educate a ministry that is to deal with our foreign populations. This effort is not only Christian and denominational but patriotic. At the Old German Theological School of Newark (Presbyterian) it is held as a fundamental principle that "to reach any powerful body of foreign people in a large way there must be a native ministry springing from among the people themselves. In view of the great power of the German people in this land it is wise to concede the German language during the period of transition. Success in German churches among adult Germans by ministers preaching exclusively in the English tongue is exceptional, depends on special individual genius, and can not be depended upon for a general system of evangelization. * * * In order to bring the German mind—educated through a long history so entirely different from our own—into sympathy with our doctrine and practice, a rightly devised and wisely conducted indoctrination of the German mind is necessary. * * * The instruction should be in both languages. * * * The graduate as an individual should gravitate towards the German flock, the pastor and flock as a mass should gravitate towards the American life. * * * The practical effect of the education of German ministers by our established American theological seminaries has been to educate the student away from the German people, thus gaining the individual pastor but losing the flock."

The German Baptist churches in America, according to the Rochester Theological Seminary, were, in 1850, only 10 in number[1] and, as their number increased many young men of mature years felt themselves called upon to preach the gospel to their countrymen, and the course of the German department, established many years ago, was arranged to suit their scholastic attainments. The course of instruction is subject to modification, according to the needs of the students. The study of the English language does not cease with the second year, but is continued by attendance at many of the lectures and other exercises of the English department. The course of instruction, now extended to six years, is divided into two parts; first, a preparatory or academic course, embracing the three lower classes; and, secondly, the theological course proper, embracing the three higher classes. Students in these higher classes not infrequently continue at the same time their academic studies.

To meet "manifest and growing needs" the German department of the Chicago Theological Seminary was opened in 1882, the Dano-Norwegian in 1884, and the Swedish in 1885. "The German department is in close connection with the German Seminary at Crete, Nebr., and has already received students from it. The Swedish department has the approval of many of the Swedish churches in this country, both among those which are independent and those which belong to the 'förbundet.' The Dano-Norwegian department has no ecclesiastical connections. It originated in the suggestion of a banker in Chicago, a Norwegian by birth, who has rendered it pecuniary aid." These foreign sections of the school are thus described:

The departments are under the charge of able and judicious teachers of high Christian character, graduates of foreign universities. The instruction given to the students in these departments is similar to that of the special [English] course, and it is expected that they will, as far as possible, attend lectures in the middle and senior years with the regular classes. It is required, also, that all foreign students shall take at least two exercises a week each year in their own languages. They are allowed to omit in the English course, in the first year, homiletics and natural theology; in the second year, Old Testament introduction; and in the third year, pastoral theology. They have an equivalent for these studies in their own languages. Instruction in English is given

[1] Now 150.

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to those who are not familiar with that language by Rev. Reinert August Jernberg, a native of Norway, a graduate of Yale College and of Chicago Theological Seminary.

The Slavic department of the Oberlin Seminary was opened at the instance of the officers of the American Home Missionary Society, and has for its object the training of young men of Slavic descent for missionary work among their countrymen in the United States. The course of study now occupies three years, and is pursued in English and Bohemian. In Bohemian, the students are taught by a native teacher the correct use of the language, and are drilled in the preparation and delivery of such addresses as are likely to be required of them. The students for this department are obtained through the instrumentality of the superintendent of missionary work among the Slavic people.

Quite as near to national sympathy, and, in a certain sense, still more deserving of it, are the descendants of those who occupied the territory now covered by a European civilization and also of those who were brought here for the purpose of being sold into perpetual slavery. An interpretation of the Constitution[1] has made the Indian a peculiar kind of foreigner in our imperium, and an amendment to the Constitution has made the negro a member of our body politic. The General Government cares for and educates the first, while the other has been launched into the struggle for existence without further provision than the constitutional provision referred to, and an education in the public schools of his native State. The improvement effected in the social condition and enlightenment of these two races is largely, if not entirely, due to religious enthusiasm. There is not an American denomination of wealth or power that has not distinguished itself in this work, and it would be invidious to make distinction further than to say that the Protestant churches have operated largely in the South as well as in the West, and that the Roman Catholic Church has also been eminently successful in missionary work among the Indians.

If we bear in mind the injunction of the German Theological School and the practice of the foreign departments of certain seminaries, one Indian school especially calls for our attention. The Santee Normal Training School was established in 1870 for the purpose of educating native teachers, preachers, interpreters, and business men for the Dakota or Sioux Nation. The great object of the work is to prepare a native agency which shall work the regeneration of a race "which is so thoroughly controlled in all their ideas and customs by their own religion that no change of life is possible except through the substitution of another." Hence, while the students are fitted for citizenship, care is taken to maintain their common interest in, and sympathy with, their own race. This gives law to the methods and makes it needful to use two languages in order to make the student a competent instructor among his own people. The very idea of education had to be planted in the Indian mind, says Dr. Riggs, the principal. The following are the studies pursued:

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Analytical Bible study	12	Physiology and hygiene	73
Arithmetic:		Oral	81
Advanced	29		154
Intermediate	43	Principles of teaching	5
Primary	81	Reading:	
	153	English	153
Botany	7	Dakota	99
Drawing	91	Word analysis	10
English composition	157	Writing	135
Geography	58		
Physical	5	INDUSTRIAL WORK—BOYS.	
History:			
Bible	66	Blacksmith shop	33
United States	12	Carpenter shop	43
English	6	Shoe shop	28
	83	Farm	87
Mental philosophy	28	Printing office	13
Music:			
Instrumental	18	INDUSTRIAL WORK—GIRLS.	
Vocal	121		
	139	Sewing, cutting, and fitting; cooking, laundry work, and housekeeping	63

[1] Worcester *vs.* State of Georgia, 6 Peters. The Rev. Samuel A. Worcester, having been seized while performing, under the sanction of the chief magistrate, the duties of a minister of the gospel among the Cherokees, and having been condemned for thereby violating as an intruder a law of Georgia, to four years' hard labor, appealed to the Supreme Court of the United States, which declared the Cherokees a nation, over which Georgia had no control, Chief Justice Marshall delivering the opinion.

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The language of the American negro being English and as he is no longer a heathen, the scope of instruction of the colored theological school is to educate the colored pastor as well as train him as a minister. Thus it follows that the course in a majority of the theological institutions or departments is very simple, being confined in its religious branches to the study of the Bible and of church history. Of the seminary type, however, is the course the Gammon Theological Seminary and that of the theological department of Howard University. In both, however, Hebrew and Greek are optional. In regard to the course in these languages the dean of the latter institution informs the Bureau that they are "for those who have had the advantages of a college education. Most of the students take the English course of study."

In closing this subject, which might as well have been headed "missionary" as "foreign departments," a project of the Boston University to enlarge the usual missionary department into a distinct course, is to be mentioned. In its scientific aspect the course might be called a department of the philosophy and comparison of religions with special reference to missionary labor. As sketched the course is of three years.

CHAIRS ON THE RELATION OF SCIENCE TO RELIGION.

One of the results of the conflict between science and those who believe in revealed religion appears to be the foundation and endowment of new chairs in our theological seminaries, with the view of studying the matter, which may be considered, in military parlance, as carrying the war into Africa. The theological seminary at Columbia, S.C., has a Perkins, professor of natural science in connection with revelation and Christian apologetics; the seminary at Princeton, N. J., has a Stuart, professor of the relations of philosophy and science to the Christian religion; the San Francisco Seminary has a Montgomery professor of apologetics and missions, while the seminary at Oberlin has a Douglass lectureship on the relations of science and religion, and on comparative religion. The scope of this instruction, as might be expected, is very intimately connected with apologetics. At least this is the case at the Columbia (S. C.) Seminary, whose course in the department of natural science, in connection with revelation and Christian apologetics, is concerned in its first year, with the philosophy or basis of religion, in its second with comparative religion, or the study of the forms in which theism has manifested itself, and in its third year with the connection of science with revelation. Of a less apologetic nature from the standpoint of Christianity as a revealed religion and more related to the science of religions, if such a term be allowed, is the comparative study of the religions of the world. The great enterprise of Oxford in publishing the sacred books of Oriental peoples, the remarkable interpretations of Greek, Roman, and Teutonic mythology and folklore, a revival, it would seem, of the exegesis of later Hellenic writers,[1] the work of Sanskrit scholars, Egyptologists, and Assyriologists in France, Germany, and England, have created an enthusiasm in the direction of inquiry into the scientific basis of theism that has forced its way into the professional schools of Christian theology, though the study is apologetic only so far as it brings out in strong relief the religion of the peoples of Europe against the background furnished by the religions of the conservative peoples of the Orient. The work of the Divinity School of Boston University will illustrate a course in—

Comparative theology.—Introduction to the history of religion, comparative theology, and the philosophy of religion; special examination of the Chaldæo-Assyrian, the Egyptian, Persian, Indo-Aryan, Chinese, Greek, and Teutonic religions; comparative cosmology and mythical geography of the most ancient nations; essays and discussions.

The courses of the Presbyterian seminaries at Princeton and San Francisco are more particularly concerned as yet with theism and anti-theistic theories. The Princeton course does not seem to be definitely fixed. The dean of the Ryder Divinity School of Lombard University informs the Bureau that the course of that school gives prominence to the relations subsisting between science and religion. The course of the department of the seminary at Columbia, S. C., is given in full.

[1] Hibbert Lectures for 1888, Lecture III.

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NATURAL SCIENCE IN CONNECTION WITH REVELATION AND CHRISTIAN APOLOGETICS.

The instruction in this department is given by means of lectures and recitations. No text-books are prescribed, but books of reference are recommended. Oral and written exercises are regularly required in the class room.

Each year a course of lectures is given to the several classes in the seminary. In these courses the ground of Christian apologetics is covered in a general way. In all the courses attention is directed to the scientific aspects of the various topics under discussion; and during the senior year special attention is given to the relations of natural science and revelation.

1. *Junior year.*—The nature, scope, spirit, and aim of apologetics; the theory of knowledge, and the relations of knowledge and belief; the nature of the religious consciousness and theistic belief; the various theories to explain the origin of religion; theistic arguments in detail, and their precise import; antitheistic theories: Atheism, agnosticism, positivism, materialism, and materialistic evolution, pantheism and idealistic evolution, deism, socialism, secularism. Other topics required from time to time in defense of Christianity will be taken up.

2. *Middle year.*—Comparative religion: Islam, religions of Egypt, Canaan, Phœnicia, Assyria, Babylon, Greece, Rome, Persia, India, China, Japan, Western Europe, and savage tribes. The supernatural in its historical manifestation. Revelation as historical: Higher criticism and false historical theories of the Scriptures. The Miracle: Its historical evidence and import. The Christ of history: Discussion of false historical views of Christ and the Gospel narratives. The supernatural in a kingdom: The church historically considered. The evidences in general, external, internal, and experimental.

3. *Senior year.*—The connection of science with revelation: Several preliminary questions considered. The field of scientific inquiry will be reviewed and results compared with the Scriptures at various points of contact. Physics: Matter and force briefly considered. Biology: Nature and origin of life. Origin of species by the theory of descent: Anhropology, relation of man to the brute creation, the races of men, the unity and antiquity of the race, man's primitive condition, the pre-Adamite theory. Geology: Specially in its bearing on Genesis. The Deluge: Astronomy and chronology as they relate to the Bible, creation and evolution.

At New Haven a university professorship of music has been created, which is for the divinity school as well as for other departments of Yale. In fact music, elocution, and physical culture appear to have been assuming considerable proportions as concurrent theological studies or exercises.

LAW.

Through a committee, the National Bar Association has for nearly a year been making an investigation of the condition of instruction in jurisprudence, not only in America, but the world over. By the agency of this Bureau a circular of inquiry has been distributed, the answers to which are now receiving the attention of the committee. In a few days their report will be given to the public, and there is therefore no necessity of instituting for the law schools such a far less pretentious and thorough study as has here been made for the schools of medicine and theology.

[NOTE.—As these pages go through the press it can be definately stated that the final report of the committee will appear as a part of the annual report of this Bureau for the school year 1890–91, and also, at an earlier date, in phamplet form.

The report as thus presented will contain the results of the very thorough study which the committee made of the methods in vogue in a number of our representive schools of law, and a supplementary series of essays dealing with the study of jurisprudence in European schools, the curricula (in tabular form of the American schools of law, and with the study of law in collegiate institutions and commercial schools.]

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SCHOOLS AND COLLEGES OF APPLIED SCIENCE.

REQUIREMENTS FOR ADMISSION.

The colleges and departments endowed with the national land grant of 1862 may be divided into two classes when taken with reference to their requirements of admission. One class—not quite half of the whole number—is composed of those who require nothing more than proficiency in the studies of the grammar grade of the public schools, while the other class requires in addition the elements of algebra and geometry. In several cases, however, algebra to quadratic equations and plane geometry are deemed sufficient, while in one case, to algebra and geometry completed is added trigonometry. Botany, chemistry, or physics is required in several schools and in one Latin and in another French. As about half of the schools have preparatory departments, it would seem that any deficiency on the part of the candidate might there be made good before he entered upon his course in the collegiate department. The arrangement of the University of Minnesota in this respect is unique; it has a preparatory department, but even that is an agricultural course. In the catalogue for 1891-92 the reasons for the institution of two agricultural courses are given with considerable force, as follows:

"Observation and experience have shown that all the facilities afforded by the regular colleges of the country for agricultural education have failed to attract any large number of farmers' sons. The requirements for admission are such as to compel the boy to leave home for one or two years to secure such preparation, and this, together with the four years necessary to complete a full course, entails an expenditure of time and money which comparatively few can afford, and the education thus received, while valuable in itself, fails in many respects to furnish the training and knowledge needed by young men for the practical duties of the farm. In order to meet this want the board of regents of the university has established a "school of agriculture" with a full equipment of buildings and instructors on the experiment farm, where students live, work, and study during the three years devoted to this department. * * * Students will be received without examination in subjects on which they can furnish the certificates of high schools or of county superintendents."

Graduates of the School of Agriculture are admitted to the college. In the catalogue above cited the number of students in the College of Agriculture is given as 5, all freshmen; in the School of Agriculture, 104. In two or three institutions a shorter course is provided, generally of two years, which serves the purpose of the school of agriculture of the Minnesota University.

Turning now to the technological schools not endowed with land grant the same subjects are required as in the case of the schools endowed with the land grant. At the Lawrence Scientific School of Harvard, the John C. Green School of Princeton, the Chandler Scientific School of Dartmouth, the Towne Scientific School of the University of Pennsylvania, the Polytechnic School of Washington University, and the Lehigh University, it is no surprising that the requirements in mathematics should be uniformly high; but the distinguishing feature between the school attached to a school of belles lettres and the isolated institution for the benefit of agriculture and the mechanic arts is the demand for literary culture, as shown by the requirement of a foreign language by the departments of colleges and universities. The Sheffield School of Yale and the Massachusetts Institute of Technology show the same characteristic as the nonendowed departments just named. Cornell, endowed with the national land grant, does not require a foreign language in the preliminary examination unless the candidate enters for a degree.

There is a requirement of the Lawrence Scientific School that merits attention. In physics the candidate is examined "either in (1) astronomy (Lockyer's elementary lessons) and physics (Avery's elements of natural philosophy or Gage's elements of physics); or (2) a course of experiments in the subjects of mechanics, sound, light, heat, and electricity, not less than forty in number, actually performed at school by the pupil. These experiments may be selected from A. M. Worthington's Physical Laboratory Practice or from the 'New Physics,' by John Trowbridge, or from any similar laboratory manual."

Literary astronomy and physics call for no particular mention, but a course of forty experiments in the subjects of mechanics, sound, light, heat, and electricity, actually performed at the school by the pupil, is an important innovation. The principal difficulty in the way of this kind of instruction has been very ably expressed by Prof. Trowbridge, of Harvard, in the preface to his "New Physics," as follows:

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"The teacher may grant the comparatively small result which is obtained from the study of physics by the method of lectures and recitations; but he will immediately ask, 'How can we obtain the time for laboratory work in physics—crowded as we are with so many studies?' Moreover, the subject of physics is unlike that of chemistry or botany. In these subjects the cost of the apparatus and material is comparatively small."

It would be interesting to know how many of those applying for admission to Harvard have availed themselves of this election, but efforts to ascertain the fact have failed.[1]

In almost every school there is a "formal" examination for admission.

The selection of the beneficiary varies considerably among the institutions endowed with the land grant. In some cases it is the county judge, court, or superintendent that selects the pupil, in others the appointment is in the hands of the members of the legislature, and sometimes the selection is made by means of a competitive examination. In the Georgia School of Technology there is a scholarship for every member of the House of Representatives, filled by competitive examination. The State board of education fills the scholarship at the Worcester Free Institute, and the city school board of Philadelphia the 31 city scholarships of the Towne Scientific School of the University of Pennsylvania.

I.

COURSE IN CIVIL ENGINEERING.

Perhaps the only thing that is absolutely agreed upon as an essential for the successful practice of the profession of civil engineering is a general culture of the mind. For it seems to be thought that this general culture will give the ability of forming general ideas and of speculating upon things, the prerequisites of a scientific method.[2]

The conception of Gen. Thayer in founding the postgraduate school of Dartmouth College, which bears his name, as to what this general culture should be was more technical. He required for admission knowledge of mathematics that could only be obtained at a college or a high class technological school, and the pupil when once entered upon the course of study has his attention confined to "surveying in general," "construction in general," and special applications. (See Table A.)

The civil engineering course of other American high-class technological schools is arranged upon an entirely different plan, being, in a word, a compromise. Instead of the two years of concentrated work on this specialty as at the Thayer school, the compromise course is lengthened to four years, its admission requirements are lowered to admit the high school graduate, and the first two years of the course are partly given to laying a foundation for general culture and partly for a specialty.

Turning to Europe a different condition of affairs is shown. In Germany there are 10 technical universities, called generically the Technishe Hochschulen. Admission to these technical universities is obtained under the same condition as that to the literary institutions called universities, the possession of the Reifezeugniss of a gymnasium or of a realgymnasium. An examination of the programme of the civil engineering course of the Technical University of Hanover given in Table B will show that nothing of a literary nature is there taught, for the general culture of the intellect is supposed to have been accomplished by the course in the gymnasium and to be certified to by the certificate of maturity or Reifezeugniss, which gives the student admittance to the university. What that general culture is will be shown by the courses of the Gymnasien, which are given beside the civil engineering course of the technical university. It is perhaps too much to say that the course of these Gymnasien is equal to the course of our colleges; but the programmes that follow fully explain themselves. (Table B.)

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[1] At a recent meeting the Association of Colleges in New England "invited the attention of the public" to the advisability of making the following change in the programme of the New England grammar schools:

"2. The introduction of elementary physics into the later years of the programme as a substantial subject to be taught by the experimental or laboratory method and to include exact weighing and measuring by the pupils themselves."

[2] Discussions on technical education at the Washington meeting of the American Institute of Mining Engineers, and at a joint meeting of the American Society of Civil Engineers and the American Institute of Mining Engineers.

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The course of civil engineering in France is best illustrated by the programme of the celebrated "School of Bridges and Roads" (Table C). With that logic for which the French are noted the instruction of an engineer is a series of interdependent courses in three different schools. The first of these, the lycée, corresponds to the German gymnasium as an institution of culture, though in its internal arrangements it bears a pretty close resemblance to our colleges that have a course in the ancient languages, a Latin scientific course, and also an English scientific course. On the contrary in the German college or gymnasium one, and only one, curriculum is followed, in the realgymnasium, or gymnasium without Greek there is also only one course, and in the realschule, which has neither Latin or Greek, the same unity prevails. Thus the Germans have a separate school for each separate curriculum. But in France the gymnasium and the realschule are contained in the same institution, the course corresponding to the gymnasium is called l'enseignement classique, and that corresponding to the realschule is called l'enseignement special, while to supply the place filled by the real gymnasium in the German system the enseignement classique has, after the completion of the third class, an enseignement scientifique dans les classes de mathématiques (instruction in science in the mathematical classes). Mathematics has ever been considered in France as fully entitled to be called a science as physics is, though in translating the programme the writer has adopted the fashion of English programmes. Thus in France in the same school, the lycèe, there are three concurrent curriculums. But it is only the mathematical classes that are to be considered here.

Now, it is customary for those students who intend to enter upon a course of instruction under a Faculty of Sciences or upon the course of the military school at St. Cyr, to take the first two years of Division of Science, called, respectively, the preparatory and the elementary class of science. Having finished the studies of these two years, the degree of Bachelor of Science is conferred.[1] But for those who desire to enter the school for preparing teachers for the lycée (École Normale Supérieure), or those who desire to enter the quasi military École Polytechnique, a more extended knowledge of mathematics is required, which is given in a class called special mathematics. The École Polytechnique is the second course in the education of the French engineer, but its course is concerned with unapplied science. "The course forms a great physico-mathematical encyclopædia, the instruction there given is a general instruction destined to develop the scientific mind and to furnish each pupil with the tool that later on will serve him when engaged in personal work. In a word, the school neither produces engineers nor officers. Its rôle is at once more elevated and more modest; it wholly consists in preparing students for special schools whose business is to make engineers and officers. It is at the artillery school, at the naval school, etc., during two years, and at the schools of bridges and roads, and of mines during three years, that technical instruction is given."[2]

Table C will show the character of the programmes of several French schools which form a course of instruction:

TABLE A.—AMERICA.

AN EXAMPLE OF A HIGH-GRADE COMPOSITE COURSE IN CIVIL ENGINEERING.

REQUISITES OF ADMISSION.

Short English composition and correction of ungrammatical language, geography, history of United States, arithmetic, algebra, Wentworth's Elements, plane geometry, French or German grammar, and translation of easy prose.

COURSE.

FIRST YEAR.

Common to all regular courses.

First term.—Solid geometry, algebra, general chemistry, chemical laboratory, rhetoric and English composition, French (or German), mechanical drawing, free-hand drawing, military drill.

Second term.—Plane and spherical trigonometry, general chemistry, chemical laboratory, political history since 1815, French (or German), mechanical drawing, free-hand drawing, military drill.

[1] This arrangement, especially as relating to the diplomas granted on the completion of the courses of the Lycée, was somewhat modified by the decree of August, 1890.

[2] Revue Scientifique, 1st vol. of 1887, p. 784.

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SECOND YEAR.

First term.—Surveying and plotting, topographical drawing, descriptive geometry, descriptive astronomy, analytic geometry, physics, political economy, German.
Second term.—Surveying and plotting, differential calculus, physics, physical geography, English literature, German, mineralogy.

THIRD YEAR.

First term.—Railroad and highway engineering with field work and drawing, stereotomy, advanced surveying, integral calculus, general statics, physics (heat), physical laboratory, structural geology, German, English composition.
Second term.—Railroad and highway engineering with field work and drawing, advanced surveying, elements of construction, elementary design, spherical and practical astronomy, physical laboratory, historical geology, German, strength of materials, kinematics, and dynamics.

FOURTH YEAR (PURELY PROFESSIONAL).

First term.—Theory of structures, bridges and roofs, hydraulics, strength of materials, theory of elasticity, metallurgy of iron, elements of geodesy. Options: 1. Sanitary engineering, bridge design, hydraulic measurements and sanitary field work; 2. Railroad engineering, railroad management, bridge design; 3. Least squares, geodesy, physical laboratory, hydraulic measurements.
Second term.—Theory of structures, bridges and roofs, English composition, business law, thesis work. Options: 1. Hydraulic engineering, machinery and motors, bridge and sanitary design, public hygiene; 2. Railroad engineering, machinery and motors, bridge design; 3. Hydraulic engineering, geodesy and map projection, design, differential equations.

THE CURRICULUM OF THE THAYER SCHOOL OF CIVIL ENGINEERING.

REQUISITES OF ADMISSION.

Candidates for admission must pass a thorough examination in the following subjects:
(1) English grammar; (2) geography; (3) history of the United States; (4) arithemetic; (5) bookkeeping, only the simpler principles and methods of single and double entry; (6) algebra, Bourdon; (7) geometry, Legendre; (8) trigonometry and mensuration; (9) compass surveying, Murray; (10) descriptive geometry, including shades, shadows, perspective, Church, and isometrical drawing, Warren; (11) analytic geometry, Bowser or Church; (12) calculus, Rice and Johnson or Bowser; (13) analytic mechanics, Wood's elementary; (14) chemistry, any good elementary work including brief treatment of organic chemistry, *e. g.*, Barker's; (15) physics, Ganot; (16) astronomy, Newcomb and Holden; (17) physical geography and meteorology.

COURSE.

SURVEYING IN GENERAL.

A.—Instruments and fundamental operations.—Construction and adjustments of all essential instruments used in the field and office. Principles and practice of location and measurement of lines and of the measurement of angles.
B.—Surveying and location.—Of lines and areas; leveling; triangulation; topography, including hydrography; mining surveying; city surveying; geodesy, including practical astronomy (as to location of meridian and determination of latitude, azimuth, and time), outline of principles and methods; office work; computing, adjustment, and comparison of observations, plotting, and estimating.

CONSTRUCTION IN GENERAL.

C.—Mechanics and general applications.—(*a*) Mathematical theory of motion; (*b*) physical science of motion in general; (*c*) statics and dynamics of rigid bodies; (*d*) statics of fluids; (*e*) dynamics of fluids; (*f*) principles of graphical statics; (*g*) elements of mechanism.
D.—Nature of materials.—(1) Physical and chemical properties, by general description and analysis, of all materials used for construction, including a suitable course on mineralogy; (2) mechanical properties, considered analytically and experimentally.
E.—Fundamental applications of materials.—(1) Special forms of materials and structural elements, including stonecutting, carpentry, ironwork, workshop appliances, etc.; (2) masonry and foundations—nomenclature, principles, methods, and appliances; theory of retaining walls and arches; (3) estimates, specifications, and contracts.

SPECIAL APPLICATIONS.

F.—Bridges and roofs.—Trusses, arches, and suspension bridges; mathematical and graphical analysis of stresses; general study of construction and preservation; tours; designing.
G.—Rockwork, tunneling, and mining.—Outlines of geology; explosive agents and blasting, theory and practice; special appliances and methods in subterraneous works.
H.—Highways and railways.—Surveys, construction, maintenance, and operation—leading principles and practical details.
I.—Hydraulic engineering.—Principles and data of hydraulics; collection, storage, and distribution of water; Hydraulic motors—theory, construction, and operation.
J.—Heat and heat engines.—Principles of thermodynamics; fuels and their combustion; steam—heat engines—construction and operation of typical forms; application of laws.
K.—Sanitary engineering.—Drainage and sewerage—systems and appliances, governing principles, heating and ventilation.
L.—Rivers and harbors.—Principles relating to improvement; surveys and observations; constructions in different cases; methods and means of procedure.

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An Example of the Usual Course in Civil Engineering.

REQUISITES FOR ADMISSION.

Arithmetic.—Examples in all the fundamental rules, together with reductions in the metric system of weights and measures.
Algebra.—Fundamental principles and operations, factoring, least common multiple, greatest common divisor, fractions, involution, evolution, radicals of the second degree, simple and simultaneous equations of the first and second degree.
Geometry.—Plane and solid.
English.—The principles of English grammar and composition.
Chemistry.—Eliot and Storer's Elementary Manual of Chemistry, or an equivalent.
Physics.—Stewart's Elementary Physics, or an equivalent.

COURSE.

FIRST YEAR.

First term.—Algebra and trigonometry, chemistry (lectures), chemical laboratory, rhetoric, French, mechanical drawing.
Second term.—Analytical geometry, chemistry (lectures), chemical laboratory, English literature, French, descriptive geometry and drawing.

SECOND YEAR.

First term.—Surveying, analytical geometry, descriptive geometry, physics (lectures and recitations), German, French, drawing.
Second term.—Surveying and leveling, calculus, shades, shadows, and perspective, physics (lectures and recitations), French, German, drawing.

THIRD YEAR.

First term.—Railroad engineering, strength of materials, mechanics, physics (lectures and laboratory), topography, German, mineralogy, drawing.
Second term.—Railroad engineering, mechanics, machine drawing, stability of structures, physics (lectures and laboratory), stereotomy, German, geology.

FOURTH YEAR.

First term.—Astronomy, graphical statics, steam engine, hydraulic engineering, roofs and bridges, architecture.
Second term.—Engineering construction, details of practice and design, specifications and contracts, sanitary engineering, geodesy, thesis work.

Table B.—GERMANY.

Course of the Gymnasium of Stettin, in Pomerania (a Town of 116,000 Inhabitants).

REQUISITES FOR ADMISSION.

Religion, German grammar, reading, memorizing, orthography, geography, fundamental rules of arithmetic and denominate numbers, writing. [These are the studies of the last year of the Vorschule or preparatory school.]

COURSE.

Sexta.—Bible history, German (exercises in reading and repetition of what has been read, grammatical and orthographic exercises, memorizing poems, to wit: (1) Der Gute Kamerad, Uhland; (2) Wandelnde Glocke, Göthe; (5) Des Deutschen Knaben Tischgebet, Gerok; (6) Die Wacht am Rhein. A written exercise weekly, Latin grammar and reading book, history, and geography (Greek and Roman biographies, non-European lands), arithmetic, botany, writing, drawing.
Quinta.—Religion, German, Latin, French, history and geography, arithmetic, botany and zoölogy, writing, drawing.
Quarta.—Religion, German, Latin (Nepos), French, history, geography, business arithmetic, geometry, natural history, drawing.
Untertertia.—Religion, German, Latin (Cæsar and Ovid), Greek grammar, French history (German history to 1648), European geography, geometry, algebra, elements of biology.
Obertertia.—Religion, German, Latin (Cæsar, Ovid, and Curtius), Anabasis, French, English (optional), history (1648-1870), geography, algebra, geometry, mineralogy, and zoölogy.
Untersekunda.—Religion, German (study of Schiller's dramas and Göthe's Hermann and Dorothea every 4 weeks as composition), Latin (Cicero and Livy), Greek (Odyssey, Anabasis, and Hellenica), French (Voltaire and La Fontaine), Hebrew (optional), English (optional), history and geography, algebra, geometry, physics.

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Obersekunda.—Religion, German, Latin (composition, (1) Tarquinius Superbus Roma expellitur; (3) Hannibal bellum contra Romanos parat), Greek, French, Hebrew (optional), English (optional), history and geography, algebra, trigonometry, physics.

Unterprima.—Religion, German, Latin (Cicero, Tacitus, Horace), Greek (Plato and Demosthenes), French, Hebrew (optional), English (optional), history and geography, algebra, trigonometry, physics.

Oberprima.—Religion (the Gospel according to John, the forerunners of the Reformation, etc.), German (a study of the life and works of Göthe and Schiller, with compositions on (1) How far is the observation of nature on one side depressing, on the other elevating? (2) Life is indeed a gift, but before all a duty. What influence had his residence at Strasburg on Göthe? etc.), Latin (Cicero pro Sestro, Tacitus, Horace. Theses: (1) Fortunæ inconstantiam summum quemque antiquitatis virum exportum esse; (2) De Polycrate Samis; (3) Comparantur Camillus et Themistocles, Tertium bellum Punicum narratur, etc.), Greek (Thucydides, Plato, Sophocles), French (Corneille's Cid, Molière's Femmes Savantes, conversation, written extemporalia), Hebrew (optional), English (optional), history and geography, physics, mathematics, algebra, stereometry, trigonometry, geometrical analysis.

COURSE OF THE REALGYMNASIUM OF STETTIN, IN POMERANIA.

REQUISITES FOR ADMISSION.

Religion, German pieces in prose and verse, natural history of the surrounding country, fundamental rules of arithmetic and simple denominate numbers, writing. [These are the studies of the last year of the Vorschule, or preparatory school.]

COURSE.

Sexta.—Bible history of Old Testament to Psalms, etc., study of pieces read in class, learning poetry, words, and the declensions, simple sentence, writing and reading every week a composition, Latin grammar to verbs, third, conjugation in io, every week a Latin exercise, Greek and Roman myths (Sagen), globes and non-European countries, arithmetic, study of twenty-five plants with easily determined organs, animals of the first two classes, drawing from straight-line figures.

Quinta.—Bible history, German, Latin, French, German myths, geography, arithmetic, natural history, drawing.

Quarta.—Religion, German, Latin, French, history, geography, geometry, arithmetic, natural history.

Untertertia.—Religion, German, Latin (Nepos and Cæsar) French, English, history, geography, geometry, algebra, natural history, drawing.

Obertertia.—Religion, German, Latin (Cæsar and Ovid), French, English (Scott's Tales of a Grandfather), history, geometry, algebra, botany, zoölogy, drawing (freehand and mechanical).

Untersekunda.—Religion, German (essays on masterpieces), Latin, French, English, history and geography, geometry, algebra, goniometry, physics, mineralogy, perspective.

Unterprima.—Religion, German, Latin (Sallust and Livy), French (Racine and Molière), English (Shakespeare and Macaulay), history (1517–1763), plane and spherical trigonometry and stereometry, algebra, physics, chemistry, drawing.

Oberprima.—Religion, German, Wallenstein, Macbeth, Egmont, Göthe's Iphigenia in Tauris compared with that of Euripides, Iphigenia in Aulis of Racine compared with that of Euripides, the Orestes of Æschylus and the Electra of Sophocles, lesser writings of Schiller, some of the more difficult poems of Schiller and Goethe, elements of empirical psychology, rhetoric (selected portions) Theses, (1) examples of everyday sense deceptions, (2) discussion of ideas, the fancy, and hope in connection with Goethe's poem, entitled "Meine Göttin," (4) Was Schiller right in his "Critic of Egmont?" (8) the groundwork of Schiller's "Was heisst und zu welchem Ende studiert man Universalgeschichte?" (8) characteristics of the clergy, the nobility, and the commercial class of cities (Städtewesens) during the Middle Ages; What is culture? Latin (Horace, Cicero, Tacitus, Livy), French, English, history (1763–1871), analytical geometry, new geometry, physics (experimental physics), chemistry (the metals), drawing.

Optics.—Colors, spherical lenses, the focus, enlarging apparatus.

Mechanics.—Motion of falling bodies, friction, elasticity, unelastic bodies, the pendulum, centrifugal force, the comparison of living forces.

COURSE OF THE DIVISION FOR CIVIL ENGINEERS (BAU-INGENIEURWESEN) IN THE TECHNICAL UNIVERSITY OF HANOVER.

REQUISITES FOR ADMISSION.

The certificate of maturity (Reifezeugniss) of a German gymnasium, or real gymnasium, or a Preussische Oberrealschule.

FIRST YEAR.

Winter session.—Differential and integral calculus (4½ hours lectures, 1 of practice), analytical geometry, plane and solid (3 hours), algebraic analysis and trigonometry (3 hours average), descriptive geometry (3 hours lectures and 6 hours of practice); physics (4 hours), mechanics (3½ hours), elements of mineralogy (2 hours), freehand drawing (6 hours); in all, 23 hours of lectures and 13 of practice.

Summer session.—Differential and integral calculus (3 hours lectures, 1 of practice), descriptive geometry (3 hours of lectures and 6 of practice), plan drawing (4 hours of practice), physics (4 hours), mechanics (7 hours), elements of chemistry (6 hours), elements of mineralogy (2 hours), freehand drawing and coloring (6 hours practice); in all, 25 hours of lectures and 17 of practice.

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SECOND YEAR.

Winter.—Differential and integral calculus (4 hours), surveying (4 hours lectures, 2 hours practice), elasticity (5 hours), geology (2 hours), construction of buildings (4 hours lectures, 6 of practice), elements of machine construction (3 hours lectures, 4 of practice), building technology (metallurgy, wood, etc., 3 hours).

Summer.—Surveying (2 hours lectures, 6 practice), graphic statistics (2 hours lectures, 2 practice), hydraulics (2 hours), analytical mechanics (3 hours), geology (2 hours), construction of buildings (4 hours of lectures, 6 of practice), elements of machine building (3 hours lectures, 4 of practice); in all, 18 hours of lectures and 18 of practice.

THIRD YEAR.

Winter.—History and styles of architecture (3 hours), building construction (2 hours of lectures, 4 hours of practice), embankments and road-making (erd und strassenbau) (2 hours), railroad building (2 hours), stone bridges (2 hours lectures, 4 practice), iron bridges (2 hours lectures, 4 hours practice), hydrology and hydraulic engineering (4 hours lectures, 2 hours practice), elements of machinery (3 hours); in all, 20 hours lectures, 14 hours practice.

Summer.—Styles of architecture (4 hours practice), embankments and road-making (2 hours), railroad construction (2 hours lectures, 2 hours practice), stone bridges (2 hours lectures, 4 hours practice), iron bridges (4 hours lectures, 4 hours practice), hydrologic and hydraulic engineering, locomotives, and cars (2 hours).

FOURTH YEAR.

Winter.—Sketches of simple buildings (2 hours lectures, 4 hours practice), transportation[1] (2 hours), railroad construction (2 hours lectures, 4 hours practice), tunneling (2 hours), iron construction (2 hours lectures, 2 hours practice), iron bridges (2 hours lectures, 4 hours practice), hydraulic engineering (4 hours lectures, 4 hours practice); in all, 16 hours lectures and 18 of practice. In addition may be taken up the following: Theory of elliptical functions (3 hours), surveying and projection (2 hours), telegraphy and telephony (2 hours), political economy.

Summer.—Transportation (2 hours lectures, 2 hours practice), railroad construction (2 hours lectures, 4 hours practice), iron construction, etc. (2 hours practice), iron bridges (2 hours lectures, 4 of practice), hydraulic engineering (2 hours lectures, 4 of practice); in all, 8 hours of lectures and 16 of practice. In addition may be taken up the following: Selected parts of higher mathematics (4 hours), surveying and projection (3 hours practice), astronomical demonstrations (2 lectures), protection from lightning (1 lecture), political economy (2 lectures).

TABLE C.—FRENCH.

COURSE OF SPECIAL MATHEMATICAL INSTRUCTION IN THE COLLEGES (LYCÉES) OF FRANCE, PREPARATORY TO THE ÉCOLE POLYTECHNIQUE OF PARIS.[2]

General studies.

ELEMENTARY DIVISION OF THE LYCÉE.

Preparatory class.—(Child supposed to be 8 years of age): French, 9½ hours a week; English or German, 4 hours; history, 1½ hours; geography, 1½ hours; arithmetic, 2½ hours; lessons on common mineral substances, etc. (coal, iron, water, air, animals), 1 hour.

Eighth class.—French, 9 hours; English or German, 4 hours; history, 1½ hours; geography, 1½ hours; arithmetic, 2 hours; lessons on minerals, as before, 1 hour; drawing, 1 hour.

Seventh class.—French, 9 hours; English or German, 4 hours; history, 1½ hours; geography, 1½ hours; arithmetic, 2 hours; elementary ideas about the rocks and soil of the earth, 1 hour.

EXAMINATION FOR PROMOTION TO THE DIVISION OF GRAMMAR OF THE LYCÉE.

Sixth class.—French, 3 hours; Latin, 10 hours; English or German, 2 hours; history, 2 hours; geography, 1 hour; arithmetic and geometry, 1 hour; zoölogy, 1 hour; drawing.

Fifth class.—French, 2 hours; Latin, from 8 to 10 hours; Greek, 2 hours from January 1 to close of year; English or German, 2 hours; history, 2 hours; geography, 1 hour; arithmetic and geometry, 1 hour; botany, 1 hour; drawing.

Fourth class.—French, 2 hours; Latin, 5½ hours; Greek, 6 hours; English or German, 2 hours; history, 2 hours; geography, 1 hour; theoretical geometry (first two books), 1 hour; geology, 1 hour; drawing.

EXAMINATION FOR PROMOTION TO THE UPPER (SUPÉRIEUR) DIVISION OF THE LYCÉE.

Third class.—(Student supposed to be 14 years old): French (Corneille's Cid and Horace, Racine's Iphigénie, les Plaideurs, history of literature and composition), 2 hours; Latin (Livy 21st and 22nd books, Cicero, De Supplicils, Pliny, Sallust, Virgil, compositions), 5 hours; Greek (Odyssey, Heroditus, Memorabilia, Lucian), 5 hours; English or German (Goldsmith's Vicar, Macaulay's History, or Göthe or Schiller), 2 hours; geography, 1 hour; arithmetic, algebra, and geometry (theory of numbers, algebraic computation, regular polygons, circle), 2 hours; physics (gravity, equilibrium, liquids and gases, heat), all taught in an essentially experimental way, 1 hour; drawing.

[1] History of ways of transportation, technical and commercial management of lines of transportation, etc.

[2] This was somewhat modified in 1890.

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EXAMINATION FOR PROMOTION TO THE CLASS OF PREPARATORY MATHEMATICS IN THE SECTION OF SCIENCE.

Special mathematical classes (Section of Science).

Preparatory class.—Mathematic, algebra, geometry, cosmography, 10 hours; natural history, 1 hour; French, 3 hours; Latin (Cæsar, Cicero, Virgil, Horace), 2 hours; English or German classes, 2 hours; history and geography, 4 hours; drawing.

Elementary class.—Arithmetic, algebra, geometry, cosmography, trigonometry, elements of descriptive geometry and of mechanics, 10¾ hours; physics (gravity, heat, electricity, acoustics, optics, and inorganic chemistry, 6½ hours; French and Latin, 2 hours; English or German, 2 hours; history and geography, 3 hours; philosophy, 1 hour; drawing.

Class of special mathematics.—Revision of arithmetic, revision and completion of algebra, geometry, and trigonometry, descriptive geometry, analytical geometry of two and three dimensions, 11 hours; physics reviewed and completed, 3 hours.

COURSE OF THE ECOLE POLYTECHNIQUE (FROM AMONG WHOSE GRADUATES THE STUDENTS FROM THE ECOLE DES PONTS ET CHAUSSÉES ARE SELECTED).

The course is of two years and is given under the following heads:

Analysis.—Differential and integral calculus. This course lasts two years. It is completed by conferences upon the immediate application of the subject studied. In addition the students may be called upon to show their knowledge of the subject on paper.

Descriptive geometry.—Different modes of representing bodies, study of the principal geometric surfaces. This course occurs during the first year.

Stereotomy.—Carpentry and stone-cutting. Course occurs in second year.

Mechanics and machines.—Course of two years. Completed by designing of the parts of a machine.

Physics.—Thermodynamics, electricity, and magnetism (first year), acoustics and optics (second year). Completed by experiments.

Chemistry.—Metals (1 year), organic chemistry (second year). Completed by experiments.

Astronomy and geodesy.—Course occurs in the second year. Completed by experiments.

Architecture.—Course is of two years. Completed by designs and projects.

Military art.—Course of the first year.

History, geography, and literature.—History of the political, military, and moral greatness of the principal states of Europe in modern and contemporaneous times. Course of two years and is completed by essays upon historical subjects.

German, drawing, coloring drawings, during two years.

COURSE OF THE ECOLE NATIONALE DES PONTS ET CHAUSSÉES AT PARIS.

First year.—Resistance of materials, construction of ways of communication, mineralogy and geology, use of wood and iron in construction, decoration of bridges, political economy, general procedure in construction, applied chemistry.

Second year.—Hydraulics, canals (navigation intérieure), construction of bridges, steam engines, use of wood and iron in construction, decoration of bridges, administrative law (first part).

Third year.—Construction of railroads, construction of maritime works, administrative law (second part), fortification.

In addition to the general course given above, the curriculum comprehends the study of the German and English languages. In each division the students are exercised in practical work, to wit, graphic representation, drawing, water color, manipulation and tests of building material, leveling and drawing plans, drawing engines and buildings. They draw up plans for construction.

These courses comprise the normal instruction of the school, but in addition there are regular conferences upon telegraphic construction, photography, management of railroads, and fish-culture. There are also other conferences whenever a discovery or the prosecution of some great work demands it.

The school possesses an experimental shop, where the students attend upon a series of operations and practical experiments.

Having thus attempted to give some idea of a course in civil engineering both at home and abroad we may venture to examine a little more closely the character of this course in the schools of the United States that have been endowed by national or by private munificence for the purpose of benefiting agriculture and the mechanic arts. This term, civil engineering, we are told by the faculty of the Rose Polytechnic Institute, is somewhat vague. Sometimes it means land-surveying, sometimes topographical mapping, and often railroad construction. In the Rose Polytechnic it means "all these and more." Let us use the catalogue of this school, then, not only for this reason, but because, having out of consideration the catalogue of the Technical High School (University) of Hanover and of other German states or provinces, and the catalogue of the Massachusetts Institute of Technology, it is among the most thoroughly and ably prepared catalogues that are in the files of the Bureau.

The details of the purely civil engineering in the Rose Polytechnic part of the course are exhibited in the schedule below. The complete course in civil engineering will be shown by substituting the several blocks of this schedule for the "shop practice" of the general course in mechanical engineering.[1]

[1] See p. 968.

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Purely technical instruction in civil engineering at Rose Polytechnic.

	FIRST TERM.	SECOND TERM.	THIRD TERM.
Freshman year	Same as "Dynamics," 2 hrs.	Same as "Dynamics," 2 hrs.	Land surveying—[illegible] adjustments [illegible] of instruments in [illegible] chain [illegible] traverse [illegible] use [illegible] stadia [illegible] supplying omissions [illegible] etc. 4 hours. Field practice with transit, level, plane table, solar compass, sextant, stadia, chaining, leveling, surveying. [illegible] hours.
Sophomore year	Theory and practice of [illegible] surveying, the work required and level parties and duties of each; surveying, mapping, [illegible] paying, etc. 110 hours; Railroad surveying: map-drawing, retaining walls and theory of foundations. 114 hours.)	Topographical drawing. The U. S. System of Government system of land surveying; rural [illegible] curves, compensations of earthwork. 110 hours. Algebraic deduction of stresses in framed structures, including roofs and [illegible] and bridge trusses; application of the method of least squares. (96 hours.) Designing and dimensioning structures according to the best specifications. 114 hours. Laboratory practice. 46 hours.) Thesis work.	Graphical deduction of stresses in roof and [illegible] trusses. 30 hours.) (46 Stereotomy. hours.)
Junior year			
Senior year	Algebraic and graphical deduction of stresses in arches and continuous trusses; suspension bridges. 114 hours.)		Lectures and readings: foundations, hydraulics, sanitary engineering, etc. 114 hours; laboratory practice 46 hours; thesis work.

Less adapted to show an actual course of civil engineering, but excellently adapted to show how mining, mechanical, electric, and sanitary engineering and even practical work in geology and chemistry are connected with *civil* engineering, is the scheme of the Massachusetts Institute of Technology. The first column of the following schedule, it is hardly necessary to say, shows the department of civil engineering, the second the method by which it is taught, the third the instructor, the fourth the course or courses which include the particular department of civil engineering, the fifth the year, and so on. The first year of study is general and resembles that of the school whose curriculum is given first in Table A:

Purely technical instruction in civil engineering at the Massachusetts Institute of Technology.

Subject.	Lect., rec., lab., draw., or field.	Instructor.	Taken by students in—	Year.	Term.	Number of weeks.	Hours per week.
Surveying	Lect., rec., field, draw.	Burton, Robbins, Stanwood.	Civil, mining, sanitary engineering, geology.	2	1, 2	30	6
Surveying instruments (six lessons).	Lect., field	Burton, Robbins.	Mechanical engineering.	3	2		
Surveying	Lect., field	do	Mining engineering	2	1	15	4
Descriptive geometry and drawing.	Draw	do	Civil, mining, and sanitary engineering.	2	1	15	2
Surveying	Lect., field, draw.	Burton, Robbins, Stanwood.	Civil and sanitary engineering, geology.	3	1, 2	30	2
Geodesy	Lect., field	Burton	Civil engineering	4	1, 2	30	2
Astronomical surveying	Lect., field	do	do	4	1	15	1
Location, road and highway engineering.	Lect., rec	do	Geology	4	1	15	2
Railroad field work and drawing.	Field, draw.	Allen	Civil, mining, and sanitary engineering.	3	1, 2	30	2
Railroad engineering	Lect., rec., draw.	Allen, Robbins	do	3	1, 2	30	4
		Allen	Civil engineering	4	1, 2	30	3

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Purely technical instruction in civil engineering at the Massachusetts Institute of Technology—Continued.

Subject.	Lect., rec., lab., draw., or field.	Instructor.	Taken by students in—	Year.	Term.	Number of weeks.	Hours per week.
Railroad management.	Lect.	Allen	Civil engineering	4	1	15	2
Stereotomy	Lect., draw	Porter	Civil and sanitary engineering.	3	1	15	4
Theoretical hydraulics.	Lect., rec	do	Civil, mining, mechanical, electric, and chemical engineering.	4	1	15	3
Hydraulic and sanitary engineering.	do	do	Civil and sanitary engineering.	4	1	15	3
Sanitary designing	Draw	do	do	4	2	15	2
Hydraulic motors	Lect., rec	do	Mechanical and chemical engineering.	4	2	15	2
Hydraulic engineering.	do	do	Civil, mining, and sanitary engineering.	4	2	15	3
Hydraulic measurements and sanitary field work.	Field, draw.	do	Civil, mining, chemical, sanitary engineering, and geology.	4	1	15	2
Elements of construction.	Lect., rec	Swain	Civil and sanitary engineering.	3	2	15	2
Elementary design	Draw	Swain, Robbins, Stanwood.	do	3	2	15	2
Theory of structures	Lect., rec	Swain, Robbins	Civil, mining, and sanitary engineering.	4	1,2	30	2
Bridges and similar structures.	do	Swain	Civil and sanitary engineering.	4	1,2	30	2
Bridge design	Draw	Swain, Robbins Stanwood	Civil engineering Sanitary engineering	4 4	1,2 1	30 15	6 6

Having now obtained what we want, that is to say, the details of a purely technical course of civil engineering, it is useless to encumber the page with other courses. In examining the above courses the reader observes that the first year is wholly or almost wholly devoted to preparatory study and the technological work does not begin until the second year; for during the preparatory year algebra, geometry, trigonometry, chemistry, or physics, and the mother tongue or another language are studied. He also will observe that during the remaining three years (those represented in the above schedules) no mention is made of geometrical and mechanical or of free-hand drawing, or of that species of drawing called descriptive geometry. Topographical and "railroad" drawing, map-drawing, and plane table surveying, etc., occur, but nothing is said of the general kinds of delineation, whether free-hand or mathematical. It must not be supposed, however, that general mathematical delineation ceases to be a subject of instruction in the two schools whose courses are represented. At the Rose Polytechnic mechanical drawing is given throughout the second and third years and descriptive geometry during the second year. At the Massachusetts Institute five hours a week for fifteen weeks of the second year, first term, are occupied with descriptive geometry. It is the same with language and the higher mathematics. They are not treated as an integral part of civil engineering, though studied concurrently by the students of the course in civil engineering. So strictly is the connotation of the term civil engineering observed at the Massachusetts Institute of Technology that not only pure, but even applied mathematics are considered as coördinate departments with that of civil engineering. The scheme of the department of applied mathematics at that school is therefore given.

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Applied Mechanics.

Subject.	Lect., rec., lab., draw., or field.	Instructor.	Taken by students in—	Year.	Term.	Number of weeks.	Hours per week.
Statics and stresses in frames.	Lect., rec ..	Sondericker.....	Civil, mechanical, mining, electrical, sanitary and chemical engineering, architecture and physics.	3	1	10	2
Strength of materials; kinematics and dynamics.	Lect., rec ..	....do.....	As above, with the omission of architecture.	3	2	15	3
Strength of materials..	Lect., rec ..	....do.....	Architecture	3	2	10	3
Strength of materials; theory of elasticity.	Lect., rec., lab.	Lanza, Merrill...	Civil, mining, and sanitary engineering.	4	1	15	3
Strength of materials, friction.	Lect., rec., lab.	....do.....	Mechanical, mining, and chemical engineering and architecture.	4	1	15	3
Strength of materials..	Lect., rec., lab.	....do.....	Architecture	4	1	7	3
Strength of materials; stability of structures; theory of elasticity.	Lect., rec., lab.	....do.....	Mechanical, mining, and chemical engineering.	4	2	15	3
Machinery and motors.	Lect., rec ..	Lanza.....	Civil, mining, and sanitary engineering.	4	2	15	3

Of the subjects composing the course of pure mathematics in the Massachusetts Institute, calculus and analytical geometry enter into the curriculum of the civil engineering and every other course, except that of biology and the general course, during the second or third year. Differential equations, theory of probabilities, and spherical and practical astronomy, are features of the fourth year of the civil engineering course for two hours a week for fifteen weeks, in the case of the first subjects and in the case of astronomy for five weeks for three hours a week during the third year. Though less radical in its treatment of applied mathematics, the Rose Polytechnic also deems that pure mathematics are not civil engineering, though they are indispensable to the student of that subject.

Mathematics at Rose Polytechnic.

	FIRST TERM.	SECOND TERM.	THIRD TERM.
Sophomore year..	Analytic geometry: Loci; treatment of point, straight line, circle, by cartesian and polar coördinates; also parabola, ellipse, hyberbola (three times a week). Determinants: Introduction to the theory of determinants, with applications (once a week).	Analytic geometry: General equation of the 2d degree between two variables; introduction to modern geometry; introduction to solid geometry, surfaces of the 2d degree, surfaces of revolution (three times a week). Calculus: Introduction to differential calculus (once a week).	Calculus: Introduction to differential and integral calculus (four times a week).
Junior year.....	Differential calculus: Successive differentiation, developments, series, partial differentiation, maxima and minima, tangents and normals, asymptotes, multiple points, envelopes, points of inflection, radius of curvature, evolutes, involutes, tracing curves, roulettes transformations, problems (five times a week).	Integral calculus: Elementary integrals, rational fractions, integration by parts, by rationalization, by series, definite integrals, problems (five times a week).	Differential equations (five times a week).

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As the methods of instruction—recitation, lecture, or field—are given in full by one of the other of the schedules of the two courses just commented upon, it is time to turn from the technical to the statistical side of the course in civil engineering in order to inquire how the time devoted to the course in other institutions compares with that given in the courses just mentioned.

The summary of the hours of public study and practice (lecture, recitation, etc.) at the Massachusetts Institute, at the Rose Polytechnic, and at the Technical University at Hanover is as follows:

	Average number of hours of recitation.		
	Second year.	Third year.	Fourth year.
Massachusetts Institute:			
Civil engineering (proper)	7	12	*a*16
Applied mechanics	0	2.2	1.5
Pure mathematics	5.3	1.2	1.5
Miscellaneous	13	8	1.5
Total (catalogue)	25.3	23.4	20.5
Total (Special Report)	27	25	23
Rose Polytechnic:			
Civil engineering	10	14	*a*14
Laboratory practice	0	0	*b*4
Pure mathematics	4	5	0
Mechanical drawing and descriptive geometry	8	6	0
Miscellaneous (not including English essay)	3	3	?
Total (catalogue)	25	28	18
Total (Special Report)	31	30	31

Technical University at Hannover (Germany)—First year: winter, 34; summer, 43. Second year: winter, 39; summer, 35. Third year: winter, 36; summer, 36. Fourth year: winter, 30; summer, 30.

It is evident that the schedules of the American catalogues do not give all the work performed; and it is necessary to obtain this by special inquiry. A preparatory step to such an inquiry was made in the form for 1889-90, sent out by this Bureau in June, 1890, its object, however, being to ascertain what courses had been introduced and were being followed in our technological institutions, and the duration and character of such courses. All these facts should be brought out, it is thought, by the following scheme though the time devoted to each course cannot be accurately indicated on so condensed a form.

Students (technological only) by courses.

Studies.	Years required to complete course.	Hours a week devoted to—		Pupils in the course 1889-90.
		Theory.	Practice (shop or laboratory).	
1. Civil engineering				
2. Mechanical engineering				
3. Mining engineering				
4. Electrical engineering				
5. Applied chemistry				
6. Architecture				
7. Agriculture, including horticulture				
8. Students in partial courses				
9.				
10.				
11.				
12.				

Some eight or nine months later the enterprise of the editor of Engineering News caused that journal to issue a circular of six foolscap printed sheets, that if answered will be a monument of the courtesy of its correspondents, and will place the public interested under obligations to the periodical which has carried

a Does not include thesis work. *b* Average.

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through such an undertaking. In June, 1891, the question represented by Table D. was sent out by the Bureau. The results of that inquiry are tabulated as they have been returned. Neither the question of 1889-90 nor that for 1890-91 was made with the ambitious design of showing statistically the history and condition of the engineering courses. Indeed, the Bureau was under the impression that such facts could not be obtained with sufficient fullness by the ordinary means of distributing circulars, and it was not prepared to formulate its desires until a study of the answers to the questions on its form and of the annual catalogues of the schools had shown that the time had come when such an inquiry would give fully satisfactory results. As said before a technical journal has undertaken the inquiry, has placed the results in the hands of an expert to be edited, and will soon publish them.

Thus relieved of any scruples in slighting the subject of technological instruction, one may turn to the consideration of a very energetic protest that has been caused by the question which forms the several headings of the following Table D. The point to which the Bureau would call special attention is expressed as follows: "This question [all the headings of Table D], although it can be readily and fairly answered by some and perhaps many of the land-grant colleges, is so unsuited to our methods that even with the best intentions I see no way of fairly and honestly answering it in figures alone." In the case of the institution thus spoken of the question served its purpose. For years past the following colleges, endowed with the proceeds of the act of 1862 for the benefit of agriculture and the mechanical arts, have found it impossible to separate their technical work from that of their technical departments and have elected to be considered as colleges of letters rather than of technology:

List of agricultural and mechanical colleges whose work can not be separated from that of the State universities of which they are departments.

Location.	Name.
Berkeley, Cal	College of Agriculture, Mechanics, Mining, Engineering, and Chemistry (University of California).
Athens, Ga	Georgia State College of Agriculture and Mechanic Arts (University of Georgia).
Baton Rouge, La	Louisiana State University and Agricultural and Mechanical College.
Minneapolis, Minn	College of Agriculture and Mechanic Arts (University of Minnesota).
Columbia, Mo	Missouri Agricultural and Mechanical College (University of Missouri).
Lincoln, Nebr	Industrial College of the University of Nebraska.
Reno, Nev	University of Nevada.
Chapel Hill, N. C	Agricultural and Mechanical College (University of North Carolina).[1]
Columbus, Ohio	Ohio State University.
Providence, R. I	Agricultural and Scientific Department of Brown University.
Columbia, S. C	South Carolina College of Agriculture and the Mechanic Arts (University of South Carolina).[1]
Knoxville, Tenn	University of Tennessee and Agricultural and Mechanical College.
Burlington, Vt	University of Vermont and State Agricultural College.
Morgantown, W. Va	Agricultural Department of West Virginia University.
Madison, Wis	College of Arts (University of Wisconsin).

[1] Now a separate institution.

The protest to which reference has been made is as follows:

SHEFFIELD SCIENTIFIC SCHOOL OF YALE UNIVERSITY,
New Haven, October 24, 1891.

Hon. WILLIAM T. HARRIS,
Commissioner of Education, Washington, D. C.:

DEAR SIR: In the absence of President Dwight the inclosed schedule has been placed in my hands to answer. I have spent some considerable time in trying to answer the questions as fully and as correctly as is possible; but the fact is that several of the more prominent ones can not (or ought not) be answered in the shape they are asked. Some can not be answered because of the way our school is organized as a department of this university, or because of the complications incident to its age, and others ought not, because, if answered according to the schedule, the bare figures tell but part of the truth, and if tabulated along with answers to the same questions from certain other institutions, are misleading, a thing I know you wish to avoid.

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The truth but half told may be as misleading as a positive falsehood, and is much harder to meet and explain when made use of as an argument in discussion or criticism. Some very bitter criticisms and many unjust charges have been brought against sundry of the land-grant colleges in the last few years, based nominally upon statistics. In most of these cases the statistics were unfair, if not positively false, in that the figures used either told but part of the truth or else meant different things when applied to contrasting colleges having different systems of classification or different methods of instruction. Several prominent institutions, North, South, East and West, have suffered from this and I think that few have entirely escaped. The fact that these colleges have suffered so much more in that respect than classical institutions I believe to be in part due to the nature of the statistics put forth, in which things essentially unlike are classed together, or things alike are called by different names. I am sure that you do not mean to help along this evil.

The land-grant colleges are so very varied in their organization, methods, scope, grade, and aims that tables of statistics made from the answers to the same questions by the different institutions may be made to show almost anything the user wants them to show. The answers to your schedule, stated in figures alone, mean very different things in the different institutions.

I have, therefore, written at more length explanations of some of my answers and the causes of my failure to answer others.

Question 6. [Table D.] This question, although it can be readily and fairly answered by some, and perhaps many, of the land-grant colleges, is so unsuited to our methods that even with the best of intentions I see of no way of fairly and honestly answering it in figures alone.

Our institution is not so organized that specific figures can be given to these questions without being misleading when the figures are used as components of statistical tables made out of the reports from several of many institutions. Many of the land-grant colleges are so organized that specific figures can be given in answer to most of these questions; ours is not.

The numerical data given in these tables would be very differently interpreted by different persons studying the figures for unlike objects. Some of the figures, even when correct, would tell but part of the truth and be misleading, and inferences very unfair to our college could be drawn from them. I know you do not wish that kind of statistics.

Please let me explain some of the more serious difficulties. First, as to what is "theory" and what "practice." When at the Washington meeting of the American Association of Agricultural Colleges, in August last, I took pains to get the views of a number of the college officers there present on this very matter, and I found the interpretation of these terms so very different by the different teachers consulted that the same facts returned according to your schedule questions by these different teachers would be very differently tabulated. Let me illustrate:

Mechanical drawing, as taught in these colleges, is certainly "technical;" it is taught in special rooms and with special appliances as truly as is the "work" in the "shops." Some teachers therefore call it "practice," but others call it "theory" and limit the term "practice" to "shop work" (done with the tools of the mechanic).

Botany and mycology are sciences necessary in teaching scientific agriculture or horticulture. They are pursued in specialized laboratories, with special appliances, and require skillful technique. Are these scientific studies "theoretical" or "practical," and is this laboratory work "theoretical" or "practical" work? Some teachers in agriculture call it theoretical, others practical, more especially if in mycology. Some call the laboratory work "practical work;" others limit the use of the term to manual labor on the farm or in the garden, barn, or greenhouse. I feel sure that were we to return the hours spent in the drawing rooms and laboratories by our students in mechanical engineering or our students in agriculture as "practice," rather than "theory," many good people who know that we have neither farm nor machine shop for manual labor would feel that we had misrepresented things.

Your section 5 of question 6 relates to "applied chemistry." Does your term "practice" include all chemical study pursued by the students in the laboratory? All our undergraduates have such practice, those in engineering during the first year only, those in agriculture for two years, those in the chemical course three years. In each case it is our way of teaching the science of chemistry, and would be called "theoretical" study by most of those who discuss "industrial education." To tabulate as "practice" the laboratory work done in elementary

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chemistry by our mechanical engineers during their freshman year, would, I think, make us liable to the charge of misrepresentation by that large and earnest class who think that "practice" is synonomous with "practical work," and that "practical work" means only "shop work," or its equivalent, farm work.

We have no workshops for teaching the handicraft of the trades, nor land for teaching the art of farming. We are, therefore, especially liable to a certain kind of hostile criticism by those who think that the especial function of these institutions is to teach the trades and occupations. The figures derived from our classes, stated in the terms of your schedule, would tell only a part of the truth, and tell it in such a way as to give a handle for use in unfair criticism whichever way we state them. If we do not tabulate all our laboratory work as "practice" we do not conform to your schedule. If we make the figures include, as "practice" in the technological courses, all our laboratory work, it makes it look as if we were doctoring the figures for the purpose of making our course seem less "theoretical" and we want to avoid the appearance of dodging these questions. We believe our method is a good and sound one and are willing that it stand squarely upon its merits.

Again, as to the "hours a week devoted to." In our system of instruction, except for recitations and lectures, we measure little by hours. We have not a single requisition which can be "made up" or "worked off" in any specified number of hours.

There is a minimum of work which a student must do before he can get a degree. But this is not measured by the number of hours spent in the class room or laboratory although a record is kept of attendance and any considerable irregularity is not tolerated.

A pet idea in our system and methods is to give each and every student a chance to do his best, to encourage acquisition by work rather than to consume time by the hour. The facilities of our class rooms and laboratories and the division of the classes into sections are in accordance with this idea and largely directed to this end. The laboratories are open much beyond the times of "required" attendance. The minimum requisition for a degree does not represent in any sense the number of hours devoted per week to any subject. So far as hours represent anything, it is the minimum attendance of the very poorest student who ultimately graduates. Consequently, we have never yet compiled and published, even for our own use, a complete tabulated statement of the number of hours per week required for all the various sections of this school other than the regular programme of daily exercises. Such a table might be made, but if we made it, it would be with the understanding that it was for the lowest possible grade of work allowed.

Again, the Sheffield Scientific School is a department of the university in which department none of the students are pursuing a classical or merely literary course in the sense in which these terms are used in classical colleges. Yet I think that it would be untrue as well as misleading to class them all as "technological" students, although everyone is pursuing some of the studies classed as technical in the great majority of the land-grant colleges.

I have given the figures which are called for in the last column, but when tabulated along with the figures from many other colleges, as from Cornell, for example, are very misleading. In Cornell, and, I think, all those colleges where there is also a classical course, the technical and scientific courses are distinct or recognized from the very entrance. Here the studies are the same for all our students during the freshman year. The classes here do not differentiate into courses until the beginning of the second year, therefore the numbers I have given include only those in the last two years. They do not include the 137 undergraduates who are not officially in the courses specified, although they are pursuing the studies required as a part of the technical courses. Nor does it include the 29 graduate students who are pursuing the higher studies supplemental to the undergraduate courses. The total is therefore smaller by over 160 than the same students would be tabulated in most of the colleges.

I have gone at length into this question, and I think you will see the force of the difficulties and the importance of the matter, especially in these times, when so many of these institutions are being made the subject of sensational criticism and hostile attack.

Question 8. (*a*) This is no State appropriation but the income from the fund derived from the land grant of 1862. The State still holds that, paying us only the income. We receive no State appropriation. (*b*) This is as it appears from the books of the college treasurer.

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Question 9. No part of this question can be satisfactorily answered. I will remark on the three items.

(*a*) The Sheffield Scientific School is but a department of the university, and all of its instruction was carried on in buildings belonging to "The President and Fellows of Yale College" for the first twenty-five years of its existence. Now, three large and several small buildings are used by this department exclusively, but much of the instruction goes on in buildings whose use is shared by other departments of the university. A part of the drawing is taught in the Street Art School; geology, mineralogy, palæontology, and zoölogy in the Peabody Museum which contains the university collections belonging to these sciences. Then, too, the university library, gymnasium, reading room, etc., etc., are used by our students in common with the rest of the university. To include all these in the property of the Sheffield Scientific School would be untrue and would grossly overrate its riches and possessions. On the other hand, to leave them all out would be to untruthfully underrate its facilities for instruction. As a part of the university, this school gets more or less benefit of all the varied possessions which constitute the material part of the university, the ownership of which is peculiarly complicated. They represent the growth of two centuries. Of the buildings in our exclusive use, two were originally built for other purposes, and later adapted to our use. I have never seen any inventory of the grounds and buildings of the university, as a whole, nor any attempt to estimate what the value of those of our department would be without the others.

(*b*) The same is true of apparatus and collections; some belong to the Scientific School especially and some belong to the University. I am not aware that any attempt at an inventory has ever been made, and any estimate would be but a rude guess. The collections are largely the collections of the University and represent the accumulations of about a century. The apparatus in the exclusive use of the Scientific School represent the accumulation of about fifty years. A set equivalent to the latter could probably be got together for $40,000, but it cost originally very much more than that. Some of it now has merely a historical or sentimental value, hard to estimate in money, yet it has still an educational value.

(*c*) "Productive funds." Here the answer is still more difficult, as it is more complicated. Some belong to the Scientific School, some to the University, a portion is for special purposes, others for general purposes. We now have the income of some university funds, which we may not have when certain university instruction is given in some other way. We have some funds of our own; we share in the use of others for general university uses; we share in still other special endowments; and any statement we might make would be a matter of bookkeeping rather than an exhibit of the capital of the Sheffield Scientific School. The treasurer's report gives the names and status of the various funds, but of some of these funds even he does not attempt to decide whether they should be considered in this schedule as belonging to "The Sheffield Scientific School" or "Yale College" or "Yale University." They are in the possession of the Yale corporation for certain uses. The University can apply the income for instruction or use in the department which it thinks fulfills most nearly the objects intended by the donor. I have spent some time with the treasurer trying to compile satisfactory answers, but I can not answer either division of this question in a way that will be both truthful and satisfactory, or that will show the money value of the educational plant we have here. For a solution we would have to go away back to colonial times for a part, and the answers are complicated in a great variety of ways.

Question 10. This refers to the special library in the school. This department shares in all the use and facilities of the university library, hence there is no attempt to make a large collection of books of our own; most of our books are to supplement those in the main library, or else those needed in the laboratories, or for handy reference.

Yours, truly,

WM. H. BREWER.

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TABLE D.—*Number of students and duration of civil engineering course.*

	Name of school.	Years required to complete course.	Hours a week devoted to— Theory. First year.	Theory. Second year.	Theory. Third year.	Theory. Fourth year.	Practice (shop, field, or laboratory). First year.	Practice. Second year.	Practice. Third year.	Practice. Fourth year.	Pupils in course 1889-90. Absolute number.	Relative number as compared with whole attendance.
1	Alabama Agricultural and Mechanical College (Alabama Polytechnic Institute)	4			5	5			6	4	28	11
2	Sheffield Scientific School	3	(a)	1			(a)				380	11
3	School of Mines, Colorado	4	15	15	15	15					3	6
4	Delaware College	4	17	17	17	17					9	11
5	Corcoran Scientific School		8	12	17						13	11
6	University of Illinois	4	15	12	20	25	10	10	10	10	95	11
7	Rose Polytechnic Institute	4	8	10	16	14	22	20	16	20	20	13
8	Maine State Agricultural College	4	15	20	20	20	10	10	10	10	49	37
9	Massachusetts Agricultural College			4								
10	Massachusetts Institute										79	9
11	Lawrence Scientific School of Harvard University		10.5	9	10.5	3	18	12	9	27		
12	Worcester Polytechnic Institute		23.5	23.5	20.5		15	15	15		33	19
13	Michigan Agricultural College	4		c5		c5		c2		c2	37	10
14	Mississippi Agricultural and Mechanical College					d5				d8	13	8
15	Missouri School of Mines and Metallurgy		5	5	1							
16	Polytechnic School of Washington University	5	16	16	15	e15	4	8	6	e6	17	24
17	Thayer School of Civil Engineering (a postgraduate course; *i. e.*, university course)	2	f246	f250			f156	f90			10	100
18	Chandler Scientific School	4	15	15	15	15					64	100
19	Rutgers Scientific School	4	5	6	5	7	4	4	4	4	34	42
20	John C. Green School of Science	4	16.5	17	17	16.5					56	48
21	Cornell University	4	49	33	34	g21					134	11
22	Case School of Applied Science	4	15	15	15	15	15	15	15	15	18	23
23	Towne Scientific School	4	15	15	15	15					24	5
24	Oregon Agricultural College		5	5	5	5					26	20
25	University of Tennessee	4	13	10	9	14	6	16	16	6	11	6
26	Texas Agricultural and Mechanical College	4			3	5			4	4	162	51
27	Virginia Agricultural and Mechanical College	4	6	6	5	3	10	10	10	5		
28	Virginia Military Institute				20	22						

a See explanation, page 956. *b* Topographical and railroad curves. *c* For first term. *d* For four and one-half months in theoretical, eight hours in practice. *e* Course of five years. During fifth year fifteen hours a week are devoted to theory and six to practical work. *f* Half days. *g* Plus four hours thesis work during spring term.

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II.

COURSE IN MECHANICAL ENGINEERING.

The instrument of the civil engineer is the transit and his sphere of practice the open country, but the instrument of the mechanical engineer is the hammer and his place is in the shop. The Roman roads and aqueducts are standing evidences of the skill of the Roman people, the pyramids and Lake Moeris testify to the ability of the Egyptian engineer, and the cathedrals of France to that of the master masons of the Middle Ages, but an "industrial revolution" waited for the invention of a steam engine that was something more than a curiosity or a toy. This industrial revolution may be said to have reached its majority, so to speak, about the middle of the present century, at least in England, where from peculiar circumstances it found a congenial soil. Progress in industry, however, must not be confounded with progress in that kind of industrial education which is given in schools. Neither the Greek literary and artistic genius nor the English industrial and political genius was born within the walls of an educational edifice. But when a nation has manifested its genius it is possible and desirable to have persons study the manifestations of that genius, formulate and teach the results, and thus mechanically a naturally less gifted or enterprising nation is elevated to a stage of culture in which the less gifted nation may reap the same intellectual or material benefits the more gifted enjoy.

In 1855, at the time of the reorganization of the Rensselaer Institute, a department of "Mechanics, Machines, and Constructions" was established in the school, with a set of text-books printed mostly in Paris and London, and in two cases in Germany, but there was no course leading to a degree in mechanical engineering, the instruction in that art being a part of the course in civil and mining engineering. At the Massachusetts Institute of Technology in 1864 there was in the fourth year a course of mechanical engineering separate from the civil engineering course after the close of the third year. At the School of Mines of Columbia College, New York City, "a course of machines which is essential in a course of mining engineering" was given, about 1864, during the third year. The first practical schools of mechanical engineering were the Worcester Institute and the Stevens Institute of Technology, though it may be objected to them that they are schools for making master workmen rather than engineers. Nevertheless, as the practical work of the course of mechanical engineering is what distinguishes the institutions in which it obtains from all other educational institutions, it is well to begin with a consideration of it.

At the Worcester Institute the regular course of instruction is prefaced by an "apprentice half year," in which the four studies that the average student of mechanical engineering has been found to be deficient in are followed from January to June. These studies are English and French literature (6 hours a week), free-hand drawing (6 hours a week), and shop practice in woodwork and moulding (36½ hours a week). Then during the three years of the course 10 hours a week are devoted to "practice, which in the second term of the last year includes machine design.

In this shop practice two principles are observed: First, that while labor with hand tools and machines should be wisely blended, yet since machinery has a constantly increasing share in the conversion of material into useful forms, the educated mechanic should know how to design, construct, and assemble the parts of a machine as well as how to make its product; and, second, that excellence in construction is to be sought as a most valuable factor in instruction. The power of the engineer, says the faculty, to decide upon general grounds the best form and material for a machine and to calculate its parts is greatly increased by blending with it the skill of the craftsman in manipulating the material, and the fact that the product is to be tested and used kindles interest in its manufacture and furnishes additional incentive to thoroughness and exactness. After the earliest lessons the practice is on commercial goods and follows the best methods of commercial production. Thus, while the institute offers a good education, based on mathematics, the living languages, physical sciences, and drawing, and sufficient familiarity with some branch of applied science to secure to its graduates a livelihood, its two peculiar features are: (1) that in addition to the general course of study and to the regular work of all students in the laboratories each student devotes at least ten hours weekly to practice in the department he has chosen; and (2) that the practice of the students in the department of mechanical engineering is in well-equipped shops in which a manufacturing business is carried on. *Construction accompanies instruction* at every step.

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The printed page is not adapted to describing the technicalities of a machine shop and even photo illustrations are more useful as evidences of the equipment of the school than of the value of its work to the future engineer. It will, then, suffice to say that in the third year of the Worcester Institute the students build one or more machines from their drawings, which, though made from definite specifications, are intended to afford ample field for the personal responsibility and originality of each student in making correct design and arrangement of parts of the machine in hand. While the work is not copying, it must not depart essentially from the best practice among manufacturing mechanics. Thus one class has constructed a 25 horse-power Corliss engine, another a 10 horse-power upright reversible engine, another a 40 horse-power Buckeye engine. The class of 1885 constructed an engine lathe 18 feet in length; the class of 1886 a Hendey shaper, etc.

The Stevens Institute is, as its catalogue claims, "a school of mechanical engineering." There are departments of physics and of chemistry, and applied electricity is taught, but the object of the school is to provide a systematic course in the theory of machine construction and a study of existing systems. Mathematics, pure and applied, mechanical drawing, shop practice and experimental mechanics, experimental physics, and chemical analysis, all are more or less powerful auxiliaries to the object of the systematic course in the theory of machine construction and the study of existing systems. But as we are now particularly concerned with the shop work, it is necessary to keep to that.

The work-shop course of the institute is intended to supply the student with a knowledge, as complete as possible, of the best existing methods and processes necessary to the construction of such mechanical designs as the theoretic part of the course will enable him to originate. But dependence is not entirely placed on the necessarily elementary and limited instruction that can be given in the machine, blacksmith, and carpenter shops, and the iron and brass foundry; but, after differences in machines, tools, and methods of manipulation are comprehended by the student, he is taken to establishments where real work is being carried on. The usual tour of the senior class is as follows:

April 1.—Bethlehem. Eagle Hotel. Steel and zinc manufacture. Bethlehem Iron and Zinc Works.

April 2.—Philadelphia. Girard House.

(1) Welding, fitting, and testing of wrought-iron pipe. Morris & Tasker's Pascal Iron Works.

(2) Arrangement and outfit of first-class machine shops. Seller's Machine Works.

(3) Locomotive manufacture. Baldwin Locomotive Works.

(4) Marine engines and shipbuilding. Cramp Ship Yard.

April 5.—Hartford. Allyn House.

(1) Machine tools, taps and dies, and standard gauges; gear-cutting by machinery, and drop forgings. Pratt & Whitney Company.

(2) Improvements in automatic screw machinery; recovery of oil from metal cuttings; straightening of bar iron. Hartford Screw Company.

(3) Machinery for manufacture of repeating rifles; manipulation of Gatling gun; construction of disc and Baxter engines; automatic wood-screw machinery; latest attempt at setting type by machinery. Colt's Armory.

(4) Latest methods of heating and ventilation. Hartford statehouse.

(5) Extreme case of use of fast-speed engines for large steam-power plant. Willimantic Linen Mill.

April 6.—Springfield. Massasoit House.

(1) Construction and use of turbine water wheels. Holyoke Machine Works.

(2) Testing of turbines. Holyoke Testing Flume.

(3) Manufacture of paper. Dickinson Paper Mills.

April 7.—Boston. United States Hotel.

(1) Most improved machinery for rapid working of brass. Hancock Inspirator Company's shops.

(2) Testing of large sizes of materials. Emery testing machine. Watertown Arsenal.

(3) Types of modern pumping engines. Leavitt walking-beam and fly-wheel type and Worthington direct-acting type. Boston sewage-pumping station, Dorchester.

April 8.—Providence. Narragansett House.

(1) Manufacture of machines in duplicate by most improved machine processes. Wilcox & Gibbs's sewing machine, machine molding, pickling and annealing of cast iron for milling machine work. Brown & Sharp Manufacturing Company.

(2) Supply water to cities and towns; direct distribution. Hope street station. Corliss (5) cylinder direct engine and Nagle geared form of engines. Reservoir

distribution, Pawtucket Water Works. Corliss compound engines and Swan turbine water wheels.

April 9.—Fall River. Wilbur Hotel.

(1) Manufacture of cotton fabrics and standard single Corliss engine. Bernard Mills.

(2) Medium high-speed engines and latest types of compound mill engines Globe Mills.

The shop exercises of the institute are finished before the close of the third year, the course being of four years. The time devoted to shop work by each student is distributed as follows:

	Hours.		Hours.
Metal lathe	225	Brass-turning	20
Pattern-making	100	Steam-fitting	16
Metal planer	65	Steam boilers	16
Vise work	40	Metal-testing	8
Molding	40	Elasticity of pine beams	8
Wood-turning	40	Flow of water through pipes	8
Blacksmithing	40	Friction of belting	8
Miller	32	Indicator card	8
Drill press	24		
Millwrighting	24	Total	*a*747
Carpentry	25		

a This total has been very materially reduced of late.

It will be observed that 40 of these hours are consumed in what is called experimental mechanics, and so can not be called shop work in the sense of manual labor. For the fourth-year class there is a regular course in experimental mechanics given during a supplementary term of three weeks. Assistants chosen from the last graduating class take charge of a group of exercises and aid other students to secure without loss of time the data belonging to experiments. As soon as the data of any one experiment are secured the students report to the chief instructor, who directs such calculations as are necessary to be deduced. This done the next exercise is entered upon. The following chart will explain the character of this laboratory work:

Order of exercises in experimental mechanics, class of 1891.

The figures 1 to 18 represent groups of students, consisting of generally two each, who are due at the test opposite their group number horizontally and at the date opposite their number vertically.

There must be just twice as many groups as there are exercises, so that every other day can be devoted to a test and to the computation of that test alternately. The instructors are always graduates, either of the last senior class or earlier ones. The exercises really consist of nine groups, each of which is so designed as to afford experimenting sufficient to occupy a full day of eight hours, and the computations occupy another interval of eight hours.

Group of exercises.	Subjects.	Time of starting tests.	June.					July.										
			24	25	26	27	30	1	2	3	7	8	9	10	11	14	15	16	17	12
A	Metal tests	9:00	1	10	9	18	8	17	7	16	6	15	5	14	4	13	3	12	2	11
B I	Hot-air engine	10:00	2	11	1	10	9	18	8	17	7	16	6	15	5	14	4	13	3	12
B II	Dynamometers	12:00																		
C I	Properties of ammonia, latent heat, heat of absorption, etc	10:30	3	12	2	11	1	10	9	18	8	17	7	16	6	15	5	14	4	13
C II	Manipulation of different gears	2:30																		
C III	Barrus Universal calorimeter	3:00																		
D I	Buckeye engine, noncondensing	9:00	4	13	3	12	2	11	1	10	9	18	8	17	7	16	6	15	5	14
D II	Buckeye engine, condensing, surface condenser	10:00																		
D III	Buckeye engine, condensing, jet condenser	11:00																		
D IV	Compound engine	12:00																		
D V	Webb dynamometer	2:00																		
E I	Centrifugal fan and jet blower	9:00	5	14	4	13	3	12	2	11	1	10	9	18	8	17	7	16	6	15
E II	Tests of lubricating oils	10:30																		
E III	Flow of water through orifices	3:30																		
F I	Boiler test	6:30	6	15	5	14	4	13	3	12	2	11	1	10	9	18	8	17	7	16
F II	Analysis of chimney gases	9:00																		
F III	Coil and superheating calorimeters	11:00																		
G I	Rotary-engine efficiency test	9:00	7	16	6	15	5	14	4	13	3	12	2	11	1	10	9	18	8	17
G II	Steam-pump efficiency test	11:00																		
G III	Flow of steam through orifices	2:00																		
H I	Injector efficiency test	9:00	8	17	7	16	6	15	5	14	4	13	3	12	2	11	1	10	9	18
H II	Safety valves, pop *vs.* common lever type	12:00																		
H III	Pelton water-wheel efficiency test	2:00																		
H IV	Hydraulic ram	3:30																		
I I	Test of thermometers and indicators	9:30	9	18	8	17	7	16	6	15	5	14	4	13	3	12	2	11	1	10
I II	Exercises with slide rule	2:00																		
I III	Calibration of water meter	3:00																		
I IV	Radiation steam coil	4:00																		

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Scheme of several exercises.

Exercise D (IV). Compound engine.

Time.	Number of revolutions by counter.	Cubic feet of condensing water by meter.	Reading of tachometer.	Pressure of steam in pounds per square inch above the atmosphere.	Barometrical pressure in inches of mercury.	Temperature of engine room.

Exercise F (I). Boiler test.

Time.	Reading of meter in cubic feet.	Steam pressure by gauge.	Draft, in inches of water.	Height of water in water glass, in inches.	Temperature in degrees F.					Barometric pressure in inches of mercury.	Remarks.	Coal record.	
					Feed water.	Chimney.	Boiler room.		Furnace.			Time.	Weight, in pounds.
							Wet bulb.	Dry bulb.					

Friction of belting.

Revolutions per minute.		Weight, in pounds.		Remarks.
Driving shaft.	Driven or Prony brake shaft.	On platform scales.	At end of Prony brake shaft.	

At the Massachusetts Institute the time devoted to the shop and laboratory is as follows:

	Hours.
Shop:	
Carpentry and wood turning	60
Pattern work	30
Forging	90
Chipping and filing	40
Machine tool work	144
	364
Laboratory of engineering	150
Total	514

At Cornell shop work is given 3 hours a week throughout the course of 4 years, except that during the spring term of the last year 12 hours are allowed to investigations and work. Work in the mechanical laboratory is given during the last two years for two hours throughout, except in the case of the spring term, as above specified.

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At Purdue University the régime is as follows:

	Hours.
Bench work in wood and turning	75
Pattern making	92
Molding and casting	23
Iron and steel forging	75
Machine and vise work in iron	115
Total	380

Let us now consider a class of schools of quite a different character as far as manual training is concerned. As a type we may take the Lehigh University course in mechanical engineering. The object of its course is the study of the science of machines. The principal subjects taught are: The nature, equivalence, and analysis of mechanisms, the mechanics or theory of the principal classes and practice of machine design. To obtain "the practical engineering data which they will most need when beginning their work as mechanical engineers the students are required to pursue a course of shop instruction which does not necessarily involve manual labor and manipulation of tools, but is principally devoted to familiarizing them with those points in patternmaking, molding, forging, fitting, and finishing, which they will need to know as designers of machinery." In brief, the student is an observer, and is familiarized with processes as a foreman rather than experienced in carrying them through to a successful issue as a mechanic. To insure the attention and develop the reason, a full description of the process under observation and the means by which it is accomplished are required of each student during a series of properly graded examples of patterns, castings, forgings, and finished pieces which are not being constructed in the shops at the time, the blue prints for which have been given to them on entering the shops. The attention of the student is directed by these drawings, a printed programme, and a teacher who examines the pupil's notes and sketches and questions him. The works of the Bethlehem Iron Company, the railroad shops at Easton and other engineering establishments in the vicinity are visited, each visit having a definite object in view.

As this approaches, perhaps, in a measure, duplicates, the characteristics of a German Technische Hochschule or Polytechnicum, an illustration of the programme of one of these schools is given. The periods represented are the first semester of the first and of the fourth years of the course. The charts are given to illustrate the way in which the German school carefully notes the difference between the lecture during which the student listens and the hour during which he is an active agent while working at drawing or descriptive geometry. Such work is called Uebungen [practical exercises] in German, and the word seems to have been understood in some of our schools to mean practical work. Thus, when it is asked, How many hours do you devote to theory, how many to practice? the correspondent is nonplussed to know whether we mean to include an exercise in descriptive geometry as practical work or not. This opportunity may therefore be taken to say that drawing in any of its forms, even designing machinery which is to be made, or making out specifications of buildings or works to be constructed, is not considered by this Bureau as practical work. Some years ago when the polytechnic idea reached America it might have been considered such, but the advance of the age in the way of organizing industrial instruction has rendered a truer definition of the term practical work necessary, or at least rendered it necessary to reserve it for the work done in the shop, laboratorty, or field.

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Winter semester, first year of Technical University at Hanover.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8 to 9 a. m.	(Lecture.) Analytical geometry.	(Lecture.) Descriptive geometry.	(Lecture.) Descriptive geometry.	(Lecture.) Descriptive geometry.	(Lecture.) Analytical geometry.	(Lecture.) Analytical geometry.
9 to 10 a. m.	(Exercise.) Free-hand drawing.	(Exercise.) Descriptive geometry.	(Exercise.) Descriptive geometry.	(Exercise.) Descriptive geometry.	(Exercise.) Machine drawing.	(Exercise.) Free-hand drawing.
10 to 11 a. m.						
11 a. m. to 12 m.	.....	(Exercise.) Building construction for mechanical engineers.	(Lecture.) Physics.	(Lecture.) Building construction for M. E.		(Lecture.) Differential and integral calculus until Jan. 1; mechanics after.
12 m. to 1 p. m.	(Lecture.) Physics.		(Lecture.) Building construction for M. E.	(Lecture.) Physics.	(Lecture.) Physics.	
3 to 4 p. m.	(Lecture.) Algebraic analysis and trigonometry until Jan. 1.	(Exercise.) Mechanics after Jan. 1.	.....	.....	(Lecture.) Algebraic analysis and trigonometry.	
4 to 5 p. m.	(Lecture.) Differential and integral calculus, one lecture.	(Lecture.) Differential and integral calculus until Jan. 1.	(Lecture.) Differential and integral calculus, one.	(Exercise.) Differential and integral calculus, one.	(Lecture.) Differential and integral calculus, one.	
5 to 6 p. m.	(Lecture.) Differential and integral calculus, one, until Jan. 1; mechanics afterwards.	(Lecture.) Algebraic analysis and trigonometry until Jan. 1; mechanics afterwards.	(Lecture.) Algebraic analysis and trigonometry until Jan. 1; mechanics afterwards.	(Lecture.) Algebraic analysis and trigonometry until Jan. 1; mechanics afterwards.	(Lecture.) Algebraic analysis and trigonometry until Jan. 1; mechanics afterwards.	

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Winter semester, fourth year of Technical University at Hanover.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8 to 9 a. m	(Lecture.) Geology.	(Lecture.) Metallurgy.	(Lecture.) Geology.	(Lecture.) Construction of manufactures.	(Lecture.) Metallurgy.	(Lecture.) Locomotive construction.
9 to 10 a. m		(Lecture.) Ship-building.	(Lecture.) Ship-building.		(Lecture.) Ship-building.	
10 to 11 a. m			(Lecture.) Hot air and gas machines.	(Exercise.) Construction of manufactures.		(Exercise.) Locomotive construction.
11 to 12 a. m	Qualities of metals, alloy, and woods.	(Exercise) Ship-building.			(Exercise.) Ship-building.	
12 m. to 1 p. m.				(Lecture.) Locomotive construction.	(Lecture.) Hot air and gas machines.	
2 to 3 p. m	(Exercise.) Experimental hydraulics.					
3 to 4 p. m				(Lecture.) Experimental hydraulics.		
4 to 5 p. m	(Lecture.) Heating, ventilating and lighting.	(Lecture.) Qualities of metals, alloys, and woods.	(Lecture.) Spinning, weaving, and paper-making.	(Lecture.) Heating, ventilation, and lighting.	(Lecture.) Spinning, weaving, and paper-making.	
5 to 6 p. m			(Lecture.) Industrial economy. (Special.) "Political economy."		(Lecture.) Industrial economy.	
6 to 7 p. m			(Lecture.) Principles of electro-technics.	(Lecture.) Principles of electro-technics.		

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To illustrate the character of the "dynamic" element in a course of mechanic Institute; on the opposite pages are given in one column the course of me- proper:

Year.	First term.		Second term.
	Course.	Dynamics.	Course.
Freshman ..	Algebra, geometry, free-hand drawing, elementary physics, English, practice in wood shop.	Practice in wood shop; use of hand tools, chisels, saws, planes, bits, etc.; laying out frames from working drawings; use of the turning lathe, circular saws, jig saws, planing and boring machines (16 hours a week).	Algebra, trigonometry, free-hand drawing, elementary chemistry, German, practice in wood shop.
Sophomore.	Determinants, analytic geometry, descriptive geometry, elementary mechanics, free-hand drawing, chemistry and chemical laboratory, German; practice in machine shop, blacksmith shop, and foundry; care of boilers and engines.	Elementary mechanics.—Mass, momentum, collision, force, work, energy, power, units (two lessons a week). Practice in machine shop, with instruction in the use of machine tools and the various operations of machine construction; turning, planing, drilling, boring, filing, thread-cutting, scraping to a true surface, finishing, etc.; construction of simple machines; forging of simple machine parts; foundry practice; care and management of engines and boilers (10 hours per week).	Analytic geometry, introduction to differential calculus, descriptive geometry, elementary mechanics, mechanical drawing, chemistry and chemical laboratory, mineralogy, German; practice in machine shop, blacksmith shop, and foundry; care of boilers and engines.
Junior	Differential calculus, mechanical drawing, analytical mechanics, French and German; practice in machine shop, blacksmith shop and foundry.	Analytical mechanics.—Equations of motion; attraction, potential, hydrodynamics (five lessons a a week). Practice in machine shop; construction of useful machines from working drawings, such as foot lathes, drill presses, engine lathes, steam engines, etc.; forging tools for use in machine shop, care of boilers and engines, practice in brass foundry and moulding room (10 hours a week).	Integral calculus, mechanical drawing, physics, lectures on the method of least squares, French and German, lectures on astronomy, practice in machine shop, steam-engine and general machine-tool construction.
Senior	Applied mechanics, thermodynamics, chemical technology, English literature, physical laboratory, machine design, engineering laboratory, practice in machine shop, steam-engine and machine-tool construction.	Rankine's applied mechanics; forces in straight-line, parallel, and inclined forces; stress, ellipse of stress (four lessons a week). Machine design, with lectures on the proportional parts of machines; design of simple machines (6 hours a week). Laboratory work (6 hours a week). Practice in machine shop; construction of high-class machine tools, steam engines, etc.; making and tempering of standard tools, reamers, drills, milling cutters, gauges, etc (8 hours a week.	Applied mechanics, thermodynamics, chemical technology, political economy, physical laboratory, machine design, engineering laboratory, practice in machine shop; making of standard tools, including forging, tempering, etc.; thesis work.

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ical engineering, recourse is again had to the curriculum of the Rose Polytechchanical engineering and in the next the development of the mechanical feature

Second term.	Third term.	
Dynamics.	Course.	Dynamics.
Practice in wood shop of first term continued (14 hours a week).	Algebra, spherical trigonometry, mechanical drawing, elementary chemistry, German, practice in wood shop.	Practice wood shop continued, construction of patterns of a simple character (14 hours a week).
Elementary mechanics.—Composition of velocities and accelerations, parallel forces, center of gravity, simple machines, friction (two lessons a week). Practice in machine shop of first term continued (10 hours a week).	Introduction to integral calculus, descriptive geometry, elementary mechanics, mechanical drawing, chemistry and chemical laboratory, mineralogy, German; practice in machine shop, blacksmith shop, and foundry; care of boilers and engines.	Elementary mechanics.—Projectiles, periodic motion, harmonic motion, pendulum, moment of inertia, etc. (two lessons a week). Practice in machine shop of first term continued (10 hours a week).
Practice in machine shop of first term continued (10 hours a week.	Differential equations, mechanical drawing, physics, French and German, practice in machine shop, steam-engine and general machine-tool construction.	Practice in machine shop of first term continued (10 hours a week).
Applied mechanics, continued; frames, strength of materials; practical application to joints, pipes, boilers, beams, etc. (four lessons a week). Machine design, continued; complete detailed drawings, with tracing and blue prints, of machines and their parts (6 hours a week). Laboratory work (6 hours a week). Practice of first term in machine shop, continued (8 hours per week).	Applied mechanics, thermodynamics. chemical technology, lectures on geology, Constitution of the United States, physical laboratory, machine design, engineering laboratory; practice in wood shop, construction of patterns for foundry use from working drawings of machines designed by members of the class; thesis work.	Applied mechanics, continued; dynamics of rigid bodies with applications to mechanism; machine design continued, with lectures on slide valve, link motion, and other forms of valve gearing (6 hours a week). Laboratory work (6 hours a week). Practice in wood shop, construction of patterns for foundry use from working drawings of machines designed by members of the class (8 hours a week.)

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The following curricula will represent in some measure the various courses of mechanical engineering that obtain at home and abroad. Attention is called to the commercial instruction in the French schools.

A.

COURSES OF MECHANICAL ENGINEERING WHOSE PUPILS VISIT MANUFACTURING ESTABLISHMENTS, BUT DO NOT WORK IN A SHOP.

CURRICULUM OF THE COURSE IN MECHANICAL ENGINEERING IN A UNIVERSITY NOT ENDOWED WITH THE NATIONAL LAND GRANT.

REQUISITES OF ADMISSION.

English grammar, geography, history of the United States, arithmetic, algebra through equations of the second degree, geometry, first six books of Chauvenet's Geometry, elementary physics.

COURSE.

FRESHMAN CLASS.

First term.—Geometry completed, elementary chemistry, French or German, drawing, exercises and declamations in English, physiology and health, gymnasium.

Second term.—Algebra completed (2 hours), plane and spherical trigonometry and mensuration, and use of logarithmic tables (2 hours), French or German (3 hours), drawing or machine design (5 hours), exercises and declamations in English (2 hours), gymnasium (2 hours).

SOPHOMORE CLASS.

First term.—Analytical geometry (4 hours), physics (5 hours), machine design (2 hours), visits of inspection (2 hours), French or German (2 hours), English exercises and declamations (1 hour), gymnasium (2 hours).

Second term.—Differential and integral calculus (4 hours), physics (3 hours), French or German (2 hours), mechanics (4 hours), steam engine, Holmes's book on (3 hours), English essays and declamations (1 hour), gymnasium (2 hours).

JUNIOR CLASS.

First term.—Calculus and analytical mechanics (2 hours), French or German (2 hours), mechanical technology (7 hours), boilers, Weisenon (1 hour), strength of materials (4 hours), literature and history, gymnasium.

Second term.—French or German (2 hours), kinematics of machinery (3 hours), machine design (5 hours), metallurgy (4 hours), machinery of transmission, Weisbach-Herrmann (2 hours), essays and original orations, gymnasium.

SENIOR CLASS.

First term.—Thermodynamics (3 hours), graphical statics (2 hours), machine design (4 hours), kinematics (3 hours), mechanics of machinery (4 hours).

Second term.—Mechanics of machinery (4 hours), machine design (5 hours), hydraulics (2 hours), measurement of power (1 hour), lectures on American and English literature (2 hours), Christian evidences (1), preparation of thesis, gymnasium.

CURRICULUM OF THE COURSE IN MECHANICAL ENGINEERING AT THE TECHNICAL UNIVERSITY OF HANOVER, IN GERMANY.

REQUISITES FOR ADMISSION.

The Reifezeugniss of a gymnasium, a realgymnasium, or an oberrealschule. (See Page 943.)

COURSE.

FIRST YEAR.

Winter semester.—Differential and integral calculus (4½ hours of lectures, 1 of practice), analytical geometry (3 hours), algebraic analysis and trigonometry (3 hours), descriptive geometry (3 hours lectures, 5 hours practice), physics (4 hours), mechanics (3½ hours) free-hand drawing (5 hours practice), building construction for mechanical engineers (2 hours lectures, 2 hours practice), drawing of machines (3 hours practice). In all 23 hours of lectures and 16 hours of practice.

Summer semester.—Differential and integral calculus (3 hours of lectures, 1 of practice), descriptive geometry (3 hours of lectures and 5 of practice), physics (4 hours), mechanics (7 hours), principles of chemistry (6 hours), free-hand drawing (5 hours practice), building construction for mechanical engineers (3 hours lectures, 3 hours practice), machine drawing (3 hours). In all 26 hours lectures, 17 practice.

SECOND YEAR.

Winter semester.—Differential and integral calculus (4 hours), elasticity (5 hours), principles of civil engineering (Grundzüge des Ingenieurbauwesens) (3 hours lectures, 2 hours practice), general technlogy (4 hours), kinds of machines (5 hours), parts of machine (5 lectures, 7 practice), pumps (½ hour). In all 26½ hours lectures, 9 practice.

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Summer semester.—Differential and integral calculus (4 hours), hydraulics (2 hours), analytical mechanics (3 hours), principles of civil engineering (3 hours lectures, 2 hours practice), general technology (4 hours), kinds of machines (5 hours), parts of a machine (4 hours lecture, 7 hours practice), pumps (2 hours). In all 27 hours lectures, 9 practice.

THIRD YEAR.

Winter semester.—Principles of practical geometry, surveying (2 hours lectures, 2 hours practice), mechanical theory of heat (2 hours), technical chemistry (3 hours), principles of miner, ology (2 hours), iron bridges (2 hours lectures, 4 practice), theory of machines (3 hours lectures, 1 hour practice), mechanical regulation of machinery and kinematics (2 hours lectures)-prime movers (6 hours lectures, 8 hours practice). In all 22 hours lectures, 15 hours practice.

Summer semester.—Principles of practical geometry (3 hours), technical chemistry (3 hours), principles of mineralogy (2 hours), iron bridges (2 hours lectures, 4 practice), theory of machines (3 hours lectures, 1 practice), mechanical regulation of machinery and kinematics (2 hours), prime movers (6 hours lectures, 8 practice). In all 18 hours lectures, 16 practice.

FOURTH YEAR.

Winter semester.—Geology (2 hours), metallurgy (2 hours), experimental hydraulics (1 hour lecture, 2 hours practice), hot air and gas machines (2 hours), special technology (3 hours), heating, ventilating, and lighting (4 hours lectures), construction of manufactories (2 hours lectures, 2 hours practice), spinning, weaving, paper making, etc. (2 hours), construction of locomotives (3 hours lectures, 3 hours practice), shipbuilding (3 hours lectures, 4 hours practice), elements of electrical technology (2 hours), business relations, (Gewerbe-Oekonomie) (2 hours). In all 28 hours lectures, 11 hours practice.

Summer semester.—Geology (2 hours), metallurgy (2 hours), experimental hydraulics (1 hour lecture, 2 hours practice), reservoirs, pumping machines, and blowing machines (3 hours), technology of the materials of construction (3 hours lectures, 4 hours practice), construction and arrangement of manufactories (3 hours practice), spinning, weaving, etc. (2 hours), locomotive construction (3 hours lectures, 3 hours of practice), shipbuilding (3 hours lectures, 4 practice), principles of electrical technology (2 hours), business relations (2 hours). In all 23 hours lectures, 16 hours practice.

CURRICULUM OF THE COURSE IN MECHANICAL ENGINEERING IN A UNIVERSITY ENDOWED WITH THE NATIONAL LAND GRANT.

REQUISITES FOR ADMISSION.

Grammar, spelling, history of United States, geography, Latin (3 books of Cæsar), arithmetic algebra and geometry completed, trigonometry.

COURSE.

FRESHMAN YEAR.

First term.—German (3 hours), history, English literature (1 hour), derivatives of algebraic functions, properties of equations, plane analytical geometry (3 hours), physics (2 hours recitation, 2 hours experimental lectures), chemistry (2 hours recitation, laboratory practice 2 hours), elementary drawing (3 hours).

Second term.—Language, physics, and chemistry as stated above; plane analytical geometry continued (3 hours), physical geography, 8 lectures, botany (3 hours), orthographic projection, isometric drawing, projection of shadows, shading and tinting, sections, developments, and intersections of surfaces (4 hours).

JUNIOR YEAR.

First term.—Analytical geometry of three dimensions, elements of the theory of functions, differential calculus, with applications to geometry and analysis, solution of numerical equations (6 hours). Surveying—Theory and practice (3 hours until November 1), kinematics (1 hour. Shop visiting—Study of machine details and tools (3 hours, beginning when surveying ends), descriptive geometry (3 hours), German (3 hours), French (3 hours).

Second term.—Integral calculus, with applications to geometry and rational mechanics (6 hours); applied kinematics, forms of teeth of wheels, cams, parallel motions, transmission of power by belts and gearing, etc. (1 hour until spring recess, then 2 hours), shop visiting (3 hours, until spring recess); study of the steam engine (2 hours after spring recess); perspective and shadows and machine elements (3 hours), German (3 hours), French (3 hours).

SENIOR YEAR.

First term.—Friction, moment of inertia, centrifugal force, elasticity and strength of materials, theory of flexure and torsion, strains in structures, construction of roofs and bridges, equilibrium and pressure of fluids, theory of flotation, flows of fluids in pipes and channels, resistance of ships (6 hours), practical exercises in designing machine details and simple machines (12 hours), study of the steam engine (2 hours), electricity (optional, laboratory work 3 hours), visits of inspection (examination of machinery in operation and reports of visits), French (3 hours).

Second term.—Hydrodynamics and theory of water wheels and turbines (6 hours), thermodynamics (3 hours), study of the steam boiler (2 hours), electricity (optional—laboratory work 3 hours, lectures 2 hours), advanced exercises in preparing designs and working drawings for machinery and estimates of weight and cost of machinery (12 hours), French (3 hours during winter half term), thesis, visits of inspection and reports.

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B.

COURSES OF MECHANICAL ENGINEERING WHOSE PUPILS WORK IN SHOPS AS WELL AS VISIT.

CURRICULUM OF A COURSE IN MATHEMATICAL ENGINEERING IN AN INDUSTRIAL UNIVERSITY IN THE WEST.

REQUISITES OF ADMISSION.

Short English composition evincing familiarity with some masterpiece of literature; arithmetic; algebra.

COURSE.

FRESHMAN YEAR.

Recitations on edges for cutting wood and adjustment of wood-working tools, shrinkage and warping of woods, and the form, adaptation, and relative strength of joints; lectures on wood-working machines and on pattern-making, moulding, and casting; mechanical drawing, exercises in wood shop, rhetoric, elocution, geometry, algebra, trigonometry.

SOPHMORE YEAR.

Lectures on management of steel in forging, hardening, tempering, and annealing; lectures on machines and machine work, mechanical drawing, iron forging, steel forging, exercises, machine work, history, English literature, physics, higher algebra, trigonometry, analytical geometry, descriptive geometry.

JUNIOR YEAR.

Principles of mechanism, mechanical drawing, metallurgy, steam engine, valves and links, experimental work, heat, chemistry, calculus.

SENIOR YEAR.

Analytical mechanics, strength of materials, steam engine, boilers, machine design, mechanical drawing and experimental work in engineering, political economy, chemistry.

CURRICULUM OF THE COURSE IN MECHANICAL ENGINEERING OF A TECHNOLOGICAL UNIVERSITY.

REQUISITES OF ADMISSION.

Short English composition and correction of ungrammatical language, geography, history of United States, arithmetic, Wentworth's elements of algebra, French or German grammar, and translation of easy prose.

COURSE.

FIRST YEAR.

First term.—Solid geometry, algebra, general chemistry, chemical laboratory, rhetoric and English composition, French (or German), mechanical drawing, freehand drawing, military drill.

Second term.—Plane and spherical trigonometry, general chemistry, chemical laboratory, political history since 1815, French (or German), mechanical drawing, freehand drawing, military drill.

SECOND YEAR.

First term.—Principles of mechanism, drawing, carpentry and woodturning (shop work), analytic geometry, descriptive geometry, physics, political economy, German.

Second term.—Construction of gear teeth, mechanism of cotton machinery, mechanism of machine tools, drawing, pattern work (shop work), differential calculus, physics, English literature, German.

THIRD YEAR.

First term.—Valve gears, thermodynamics, steam engineering, drawing, forging (shop work), integral calculus, general statics, physics (heat), physical laboratory, German.

Second term.—Steam engineering (boilers), drawing, design, and use of surveying instruments, engineering laboratory; forging, chipping, and filing (shop work); strength of materials, kinematics, and dynamics; physical laboratory, English composition, business law, German.

FOURTH YEAR.

First term.—Steam engineering, hydraulics, dynamics of machines, machine design, engineering laboratory; chipping and filing, machine-tool work (shop work); strength of materials, friction; metallurgy of iron, heating and ventilation. *Options:* Marine engineering, locomotive construction, mill engineering.

Second term.—Hydraulic motors, engineering laboratory, machine-tool work (shop work); strength and stability of structures, theory of elasticity; English, thesis work. *Options:* Marine engineering, locomotive construction, mill engineering.

CURRICULUM OF A COURSE IN MECHANICAL ENGINEERING OF A UNIVERSITY IN THE EAST.

REQUISITES FOR ADMISSION.

Short English composition upon an English classic geography, physiology and hygiene, arithmetic, plane geometry, algebra, history of United States.

COURSE.

FRESHMAN.

Fall term.—French or German, algebra, chemistry, freehand drawing, shop work, hygiene, drill.
Winter term.—French or German, algebra, chemistry, freehand drawing and machine sketching, shop work.
Spring term.—French or German, trigonometry, instrumental drawing, chemistry, shop work drill.

SOPHOMORE YEAR.

Fall term.—Analytic geometry, descriptive geometry, experimental mechanics and heat, chemical laboratory, shop work, drill.
Winter term.—Differential calculus, electricity and magnetism, chemical laboratory, descriptive geometry, shop work.
Spring term.—Integral calculus, acoustics and optics, descriptive geometry, chemical laboratory, shop work, drill.

JUNIOR YEAR.

Fall term.—Mechanics of engineering, materials of construction, designing and drawing, physical laboratory, mechanical laboratory, shop work.
Winter term.—Mechanics of engineering, machine design, mechanical laboratory, physical laboratory, designing and drawing, and drawing, shop work.
Spring term.—Mechanics of engineering, machine design, physical laboratory, mechanical laboratory, designing and drawing, shop work.

SENIOR YEAR.

Fall term.—Steam engine and other motors, physical laboratory, mechanical laboratory, mechanical engineering and machine design, shop work, electives.
Winter term.—Steam engine and motors, physical laboratory, mechanical laboratory, mechanical engineering and drawing, shop work, elective.
Spring term.—Thesis, designing and drawing, mechanical laboratory investigations, shop work, elective.

C.

CURRICULA OF MECHANICAL ENGINEERING SCHOOLS.

A SCHOOL OF THE NEW ENGLAND STATES.

REQUISITES OF ADMISSION.

English syntax and an essay on a classic English author, history of the United States, geography, arithmetic, geometry (5 books of Wentworth), algebra as far as quadratics, French.

COURSE.

APPRENTICE HALF YEAR.

English, 6 hours; French, 6 hours; free drawing, 6 hours; shop, 36½ hours.

JUNIOR.

First term.—Algebra (3 hours), geometry (3 hours), German (4 hours), general chemistry (3 hours), physics (3 hours), practice (10 hours).
Second term.—Algebra (1 hour), solid geometry (2 hours), trigonometry (2 hours), analytical geometry (1 hour), German (4 hours), general chemistry (5 hours), physics (3 hours), free drawing (4 hours), mechanical drawing (2 hours), practice (10 hours), additional summer practice (168 hours).

MIDDLE YEAR.

First term.—Analytical geometry (4 hours), descriptive geometry (3 hours), German (4 hours), qualitative analysis and mineralogy (2 hours), physics (1 hour), free drawing (2 hours), mechanical drawing (6 hours), practice (10 hours).
Second term.—Calculus (6 hours), German (4 hours), qualitative analysis and mineralogy (2 hours), metallurgy (1 hour), applied physics (1 hour), physical laboratory (2 hours), steam engineering (2 hours), free drawing (2 hours), mechanical drawing (4 hours), practice (10 hours), additional summer practice (168 hours).

JUNIOR YEAR.

First term.—Theoretical mechanics (3 hours), applied mechanics (2 hours), thermodynamics 2 hours), history and literature (5 hours), geology (2 hours), physical laboratory (2 hours). mechanical drawing (4 hours), steam engineering (2 hours), practice (10 hours).
Second term.—Applied mechanics, including hydraulics and kinematics (5 hours), steam engineering (1 hour), thermodynamics (2 hours), political science (5 hours), industrial chemistry (2 hours), thesis work, engineering, or electrical laboratory (6 hours), practice, including machine design (10 hours).

A SCHOOL IN THE MIDDLE STATES.

REQUISITES OF ADMISSION.

An essay upon a topic assigned at time of examination, arithmetic, algebra, equations of second degree, geometry, analytical and plane trigonometry, universal history, rhetoric, French reader, physics.

COURSE.

FIRST YEAR.

First term.—Logarithms and plane trigonometry reviewed, spherical trigonometry, mechanical drawing, Spanish, physics, history of the English language (lectures and essays), shop work.
Second term.—Theory of equations, analytical geometry and calculus, mechanical drawing, Spanish, light, English literature, and essays.
Third term.—Analytical geometry and calculus, exercises in mathematical laboratory, mechanical drawing, Spanish, light, English literature and essays, shop work.
Supplementary term.—Shop work.

SECOND YEAR.

First term.—Analytical geometry and calculus, machine drawing from sketches, descriptive geometry, Spanish, German, physics, English literature, essays, chemistry, analytical chemistry, shop work.
Second term.—Analytical geometry and calculus, machine drawing from sketches, descriptive geometry, German, magnetism and electricity, deductive logic and essays, general and analytical chemistry, shop work.
Third term.—Integral calculus and applications, machine drawing from sketches, descriptive geometry, German, electricity, inductive logic, essays, general and qualitative chemistry, shop work.
Supplementary term.—Shop work.

THIRD YEAR.

First term.—Analytical mechanics, kinematics, machine drawing, descriptive geometry, German, lectures on the use of instruments for making precise measures and on their application to the practical work in the physical laboratory, metallurgy, qualitative analysis, resistance of materials, the steam indicator, valve gears, link motions, and mechanism of engines, shop work.
Second term.—Analytical mechanics, kinematics, machine drawing, descriptive geometry, German, physics, metallurgy, quantitative analysis, mechanism of boilers, lectures, foundations, boilers, shop work.
Third term.—Analytical mechanics, kinematics, machine drawing, physics, metallurgy, quantitative analysis, machine design, shop work.
Supplementary term.—Experimental mechanics.

FOURTH YEAR.

First term.—Thermodynamics, vapor machines, construction, adjustment, and use of engineering instruments, graphical statics, problems in applied mechanics, machine drawing and design, physics (laboratory), applied electricity, analytical chemistry (elective).
Second term.—Heat engines, refrigerating machines, hydraulic motors, theory of bridges and roofs with graphical statics applied, selected problems, machine drawing and designing, work in physical laboratory work, applied electricity, analytical chemistry, elective.
Third term.—Work on graduating theses, including experimental investigations and general research.

A SCHOOL OF THE SOUTHERN STATES.

REQUISITES OF ADMISSION.

Arithmetic, including elementary principles, fractions, compound quantities, percentage and interest and proportion. Algebra, through simple operations, including factoring. English, including grammatical construction of sentences, and an essay or letter. Geography. History of United States.

COURSE.

APPRENTICE YEAR.

First term.—Algebra, geometry, freehand and mechanical drawing, English grammar and essays, shop work.
Second term.—Algebra, geometry, mechanical drawing and projection, English grammar and essays, shop work.

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JUNIOR YEAR.

First term.—Solid geometry, trigonometry, leveling, topography, descriptive geometry and shades and shadows, rhetoric, essays, physics, chemistry, shop work.
Second term.—Spherical trigonometry, surveying, field practice in compass and transit surveying, descriptive geometry, machine drawing, rhetoric, essays, hydrostatics, pneumatics, acoustics, chemistry, shop work.

MIDDLE YEAR.

First term.—Analytical geometry, field practice in plane table surveying, mechanical drawing, rhetoric, essays, kinematics and mechanism, physics, metallurgy, qualitative analysis, geology, shop work.
Second term.—Calculus, field practice, map work, machine designing, political economy, science of government, essays, mechanism, materials of construction, machine design, physics, qualitative analysis, geology, shop work.

SENIOR YEAR.

First term.—Calculus, special problems in designing machinery, English literature, criticisms, original speeches, analytical mechanics, machine design, physical laboratory work, organic chemistry, geology, shop work.
Second term.—Calculus, graduate work in machine design, criticism, original speeches, analytic mechanics, applied mechanics, steam engineering and prime movers, laboratory experiments, technical industries, geology, shop work.

NATIONAL SCHOOLS OF ARTS AND TRADES AT AIX, ANGERS, AND CHALONS, FRANCE, (FOR THE HIGHER GRADE OF MECHANICIANS).

Admission is obtained through competitive examination, which is upon the following subjects:
Writing, spelling, grammar, "theoretical and practical" arithmetic, elementary geometry, algebra to equations of the second degree. Elementary history of France and geography.

A.—Theory.

The theoretical instruction, always given with a view to its applications, consists of the following subjects, which occupy three years:
1. Algebra to Newton's binomial theorem, its applications and the principles which result from it.
2. Right-line trigonometry, elementary notions of cosmography, surveying.
3. Elements of analytical geometry.
4. Descriptive geometry, shades and shadows, and perspective, stone-cutting and carpentry.
5. Theoretical and applied kinematics.
6. Pure and applied mechanics, including dynamics, statics, resistance, hydraulics, and the steam engine.
7. Physics and its industrial application.
8. Chemistry and its principal industrial applications, especially metallurgy.
9. Drawing, principally industrial drawing.
10. Technology, with special reference to the construction of machines.
11. The study of the mother tongue.
12. History.
13. Geography.
14. Industrial accounts and elements of industrial economy.
15. Industrial hygiene.

B.—Practice.

The practical instruction is given in special workshops, to wit;
1. Joinery and model working.
2. Foundry work.
3. Forging and the making of small metal utensils.
4. Construction (*ajustage*).

CENTRAL SCHOOL OF ARTS AND MANUFACTURES.

The matters upon which the applicant for admission is examined are:
Analytic geometry, elementary and higher algebra, pure and descriptive geometry, physics, chemistry, machine drawing.
The school has four specialties and as the student follows one or the other of these he is called a mechanician, a constructor, a metallurgist, or a chemist.

FIRST YEAR.

A.—Theory.

Descriptive geometry, calculus, general physics, general chemistry, kinematics, construction of machines, applied hygiene, and natural history; mineralogy and geology, architecture, botany (especially the common plants of France), Zoology (especially the common animals of France), industrial drawing.

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B.—Practice.

Chemical manipulations, physical manipulations, stereotomical manipulations, plans, graphics, and problems.

SECOND YEAR.

A.—Theory.

Applied mechanics, resistance of materials employed in machines and in construction, construction and placing of machines, analytical chemistry, industrial chemistry, mineral chemistry, metallurgy, building construction (*constructions civiles*), industrial physics, industrial legislation, ceramics, dyeing, glass-blowing.

B.—Practice.

Manipulation in industrial physics, raising embankments, measuring the flow of water, construction of machines, graphics, and projects.

THIRD YEAR.

A.—Theory.

Applied mechanics, construction and placing machines, agricultural and industrial chemistry, general metallurgy and metallurgy of iron, working mines, public works, railroads.

B.—Practice.

(Not given.)

INDUSTRIAL INSTITUTE OF THE NORTH OF FRANCE.

This municipal school has two divisions or schools, technology and civil engineering, each of which is composed of three specialties or sections, mechanics, spinning and weaving, and chemistry. During the first year there is no difference between the sections, and it is only in the third year that the specialization is marked. The difference between the division of technology and that of civil engineering is that which separates the three national schools at Aix, Angers, and Chalons from the central school of arts and trades namely: The course of technology is a secondary technical course, while the civil engineering course is of university grade.[1]

The plan of study of the mechanical section of both the technological and civil engineering divisions prepares especially for instruction in machine-making and in the construction of public works. The students of the section are particularly practiced in drawing, construction, plan-making, levelling, and drawing up specifications (redaction des projects).

The students of the section of spinning and weaving after the first year follow a special elementary course, but during the third year they follow the higher courses relative to textile and the related industries. The practical exercises of spinning and weaving commence during the second year and are greatly developed during the final year.

The students of the chemical section commence the study of analytical and industrial chemistry after the first year. Later on they study in a very developed special course the principles of industrial chemistry. They are exercised in manipulation and during the last year devote the greater part of their time to practical work.

In Table D the time devoted by the student in the course of civil engineering is given as far as reported by the institutions having such courses. In the table which follows the same facts are given for the courses in mechanical engineering.

[1] Nevertheless the first year of the division of technology furnishes a preparation for entering upon the first year of the civil-engineering division.

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TABLE E—*Number of students and duration of course in mechanical engineering.*

Name of school.	Hours a week devoted to—							
	Theory.				Practice (shop or laboratory).			
	First year.	Second year.	Third year.	Fourth year.	First year	Second year.	Third year.	Fourth year.
Alabama Agricultural and Mechanical College *a*								
Sheffield Scientific School								
Delaware College *b*								
Florida Agriculture College	6	6			6	6		
The University of Illinois	15	12	20	25	10	10	10	10
Rose Polytechnic Institute	13	11	14	11	22	20	16	23
Maine Agricultural and Mechanical College	15	20	20	20	10	10	10	10
Worcester Polytechnic Institute	11	20	23.5	*c* 20.5	36.5	15	15	15
Michigan Agricultural College	8	5	10	10	10	10	10	10
Polytechnic School of Washington University	16	16	15	*d* 15	4	8	6	*d* 6
New Hampshire College of Agriculture	8	8	9	9	5	8	6	8
Cornell University	83	63	42	23				
Case School of Applied Science	15	15	15	15				
Oregon State Agricultural College *d*								
Claflin University, College of Agriculture, and Mechanics' Institute	2				2			
University of Tennessee	13	10	12	10	6	12	12	12
Texas State Agricultural and Mechanical College			3	5			4	4
Virginia Agricultural and Mechanical College	10	5	5	5	10	10	5	5

a The course of instruction is "manual training."
b Course just established.
c During the fifth year in this institution fifteen hours are devoted to theory and six to practice.
d Two hours a week both in theory and practice.

Now, let us turn to a third class of schools which is sharply defined from the two classes that have just been noticed. Like one class it lays stress on the shop feature; like the second class it lays stress on training the faculties of observation; but unlike both it does not teach a trade, but "the underlying principles of all trades," better, perhaps, expressed by "the underlying principles of construction in wood and metal." So much attention was given to this class of schools in Chapter XV of the Bureau's report for 1887–88 and in Chapter XVI of the report of 1888–89 that consideration of them is not now necessary, further than to repeat that the admirers of these schools may be divided into two groups, one group strongly maintaining the pedagogical value of the schools as secondary institutions and the other urging their value as apprenticeship schools or as preparation for apprenticeship. The three features of the shopwork in the "manual training schools" are well illustrated by the departments of the Chicago Manual Training School.

Department.	Weeks in course.	Greatest accommodation.	Pupils.
First year:			
Woodwork	40	161	161
Second year:			
Foundry	6	90	90
Forge	34	90	90
Third year:			
Machine shop	40	52	52

These systematic exercises in wood-working, forging, and fitting, usually called the "Russian system," have been adopted by many institutions of a higher grade than that of a school having a post-grammar (or high school) course of study. Thus at Swarthmore College, and at many of the schools en

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dowed with the national land grant of 1862, manual training on the Russian system has been introduced.

If the drawing that is taught in the public elementary schools of almost every important city and the clay-modeling, cardboard construction, and even carpentry that are taught in many, be excluded from consideration, inasmuch as the public schools are not apprentice schools, it will be found that the types of schools supported at public or private expense to provide the country with mechanical engineers or mechanics has been exhausted. At New York there is a school for teaching the trades of bricklaying, and at Philadelphia a weaving school, but the class of schools they represent has, as a class, no existence in America unless the trade instruction given in the schools for the deaf, blind, and delinquent be included. As we hear much talk of "industrial art," "industrial schools," etc., in Europe, what is being done there becomes of interest. The difficulty is to give a comprehensive description; for usually what is done in a single school is made to represents all the shades of meaning in which the term "industrial" school can be taken. For some years Monsieur Marius Vachon has been intrusted with an inquiry into the conditions of industrial art instruction (peculiarly near to French industrial prosperity) in Europe. In pursuance of this commission Monsieur Vachon has made extended study through Europe and has published five reports.[1] At the conclusion of his last volume he summarizes the results of his study and travel, and it is this summary that has been translated and reproduced here as the best possible way of illustrating the character of schools which do not exist as a class in America, though we have a Cooper Union, several "mechanics' institutes," and even a "Newark Technical School" for apprentices who are abnormally developed on the practical shop or side.

RÉSUMÉ OF AN INQUIRY IN REGARD TO THE SCHOOLS AND MUSEUMS OF INDUSTRIAL ART IN EUROPE.

By Monsieur MARIUS VACHON.

The mission that the minister of public instruction and fine arts intrusted me with for the purpose of studying the organization of the schools and the museums of art and industry in Europe is at length completed. I have visited 110 schools, 40 museums, and 14 great associations, and I may now present them in their proper physiognomy by typical institutions. Every form which instruction in industrial art has taken has passed under my eyes and has rendered it possible for me to make a comparison of the methods and systems which are in vogue. I, therefore, at the conclusion of my fifth report, summarize the results of this extended personal inquiry which during five years has required a year of travel and of study.

Character of instruction.

At the base of instruction in art and industry are the apprenticeship school and the school preparatory to apprenticeship. The instruction of apprentices for the trades connected with art has taken a great variety of forms, according as the State, municipality, or association which supports a school has followed one of two systems, to wit: Apprenticeship in the shop or apprenticeship in the school. The respective values of these two systems have occasioned the discussions and disputes of pedagogues, manufacturers, and political economists.

But before entering upon the work proper it is necessary that I should indicate as exactly as possible what I understand by apprenticeship in the school. There is a tendency to mistake the true character of the instruction the term indicates when properly used; and from this error unnecessary contradictions and empty polemics result.

The manual instruction that has been introduced into the French elementary schools has no relationship with true apprenticeship, and it has been clearly defined in the Dictionnaire de Pédagogie et l'Instruction Primaire of Monsieur Buisson as "School apprenticeship (apprentissage scolaire)." By this term is understood the "workshop in the school," a part of the organization of the elementary school by which a few hours of manual work are added to the usual routine of school work. It is not an apprenticeship, but a preparation for an apprenticeship; it gives the habit of and the taste for work. Whenever, as in

[1] Upon the conditions of affairs in Germany, Austria, Belgium, Switzerland, Italy, Russia, Denmark, Sweden and Norway, and England. National Printing Office, Paris, 1885-90.

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France it too frequently happens, the limit of this instruction is passed, pure apprenticeship instruction is the result, and the extremely poor work done calls forth very justly the denunciations of manufacturers. In almost all the schools of foreign countries laboratories have been organized for the application of theoretical principles, and if they are not called apprenticeship shops the manual-training school of the public-school system should not be.

APPRENTICESHIP SCHOOLS.

During my investigations I found true schools of apprenticeship both in Belgium and in Holland, and moreover they were so called. The most typical are the Iron School at Tournay, in Belgium and the Quellinus School at Amsterdam.

The Iron School at Tournay possesses shops administered as a business concern, by a lessee. The student is thus simultaneously taught theory and practice while receiving a real professional education and learning a trade. Nevertheless, the very unique and remarkable organization of this school does not give good results. The number of students is small, 75 in all, and very few finish the term of apprenticeship. The working class is not interested in the school, and the municipality and the General Government are very much concerned about its decay. Undoubtedly this type will soon be abandoned.

The Quellinus School also has a peculiar organization. When the eminent architect, Cuyppers, began the construction of the National Museum at Amsterdam, he was embarrassed by the difficulty of obtaining competent persons to execute his designs for its decoration and furnishing. Masters and workmen of ability were utterly wanting.

To train such, a school was necessary. The architect called together some friends, a society was formed, and with the concurrence of the city a school was established. The object of the school is the theoretical and practical application of drawing to carving in wood and stone. The practical work is done in a shop attached to the school, which thus is divided into two very distinct parts. The shop is the enterprise of a society which, however, realizes nothing from the work, the proceeds being distributed pro rata among the students and professors who have executed and superintended each piece of work. The students are taught drawing, but the instruction is confined to making correct designs, and is especially directed to the reading and reproduction of the designs of professional architects and designers. The management of the school, however, desires to give a more artistic character to the school and to make it a finishing institution so far as the industries taught in the school are concerned. Such as it is the organization is not sufficiently powerful to struggle successfully against the many obstacles which the journeymen carvers in stone and wood place in the way of the school's success. Moreover, the school is very expensive. Each student costs annually $113, exclusive of the interest on the building and apparatus. I am certain that a reorganization must be effected soon or the school will go under.

In Russia, where a national industry has only lately come into existence, apprenticeship schools are very numerous. At the time of my visit there were more than fifty having more than 2,000 pupils. They are mostly the creations of the state or of cities aided by the state; but a number have been founded by societies or by private individuals. By the side of the great schools there are about 1,200 small schools which teach the industry that is peculiar to the village or city in which they are situated—carpentry, turning, forging, locksmithing, tanning, bookbinding, etc.

SCHOOLS PREPARATORY TO APPRENTICESHIP.

On the other hand, the schools preparatory to apprenticeship are very numerous in Europe. Of these the schools that I have studied as types are the Ambats School of Amsterdam, the Technical School of Birmingham, Heriot's Hospital School at Edinburgh, and Les Écoles St. Luc in Belgium.

Though deeming that real and industrial instruction is only capable of being given in a shop located in an industrial center, the founders of the Ambats School have recognized the necessity of a special institution where intelligent masters, free from the preoccupation of business, shall introduce children into the principal trades through the theoretical and practical demonstration of their elements and instruction in drawing. In the shops of Holland, as almost everywhere, apprenticeship is an unscientific process, and moves so slowly that the apprentice loses heart. This is due to the selfishness and the negligence of superintendents and masters.

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The Ambats school is fed exclusively by the working class. In the general course the students receive a good elementary education. In drawing the instruction is confined to the indispensable elements for the intelligent exercise of manual work. Those who desire to perfect themselves remain a long time at the school, during which they receive supplementary instruction in drawing and mathematics. Practical and manual instruction enters largely into the course. The shops are for carpentry, wood-carving, mechanical work, and locksmithing.

In this as in all schools of the same kind the management is confronted with the difficulty of holding its students. As soon as the children can use the graver and the plane a little they desert. The institution appears to prosper because it insists vigorously that the child shall be given a real manual education for apprenticeship. The society that founded the school has opened an annex in another part of the city. The cost per capita is $37 a year.

The Technical School of Birmingham and the Heriot Hospital School of Edinburg have been organized in the same spirit as the school at Amsterdam, to wit, to furnish industry with young people practically prepared for apprenticeship. But the English schools are of a higher grade than the Amsterdam school, for they will only receive students who have already finished their elementary education—who have already acquired the elementary principles of art, of science, and of literature. To the shops for manual work have been added very complete laboratories of chemistry and of physics, where the students are introduced to real scientific problems and to a certain amount of practice in industrial art. Before finishing their studies the students are engaged as future apprentices, as a rule, by the chiefs of industrial establishments. These schools are very prosperous and render great service to local industries. Day by day they grow and are constantly serving as models to new schools of the same nature that are being created in different parts of the three kingdoms.

The great institution known as the Schools of St. Luc, Belgium, follows the same course of preparing for apprenticeship to the trades which are directly concerned with art. On leaving the school the management places the young people in shops directed by former pupils, imposing on the superintendent the duty of sending the apprentice to school every evening and of admitting into the shops the professors who are charged with the duty of giving account of the conditions under which the apprenticeship is taking place and the professional progress of the apprentice. This system is rendered very practical and very valuable in results by the interest that the directors of the shops have in the St. Luc establishment, their own alma mater.

Moved by the same ideas, the work of the professional schools of Belgium has, in every important industrial center, created syndicates of the superintendents of industrial establishments, who have organized shops in their manufacturing establishments, to which the students of the industrial and professional schools are admitted. These schools give theoretical and artistic instruction; the shops the practical exercises.

Another type of schools preparatory to apprenticeship is that furnished by the numerous industrial schools of Ireland, of which the most remarkable is the school of Artane at Dublin. Only wholly orphan children are admitted, who are to devote themselves to domestic or rural work. They receive an elementary instruction, elementary ideas of science and art, and a rather complete manual education. Some thousands of children are raised in these institutions, which have the double character of a school and an asylum.

ELEMENTARY SCIENCE AND ART SCHOOLS FOR APPRENTICES AND JOURNEYMEN. (ECOLES COMPLEMENTAIRES DE L'APPRENTISSAGE.)

Of a higher grade than the schools of which I have just spoken are the industrial and the technical schools.[1] These schools aim to give the apprentice and journeyman elementary notions of science and art after his work for the day ceases. Thus the economic value of the work produced by the laborer is enhanced because it is done more rapidly and perfectly. The school completes by theory the practice of the shop.

These schools are the best type of institutions for the development of artistic and technical instruction. They answer exactly to the new conditions of the organization of skilled labor and place in the possession of the mechanic an out-

[1] What we would call industrial or technical the author calls "special professional school," which are treated of further on.

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fit that is of marvelous power and yet of great simplicity. It does not interfere with apprenticeship in the shop, the basis of industrial life, and gives the apprentice, without causing social disturbance, without loss of time, and without great expense to the workingman a solid scientific and artistic instruction. The moral discipline of the school and the essentially professional character of its instruction does not disgust the student with his daily work, but rather tends to lend it new attractions and render it more elevated and productive. Thus these institutions are innumerable.

Belgium has created 36 industrial schools, properly so called, which are destined exclusively to instruct journeymen and apprentices in the elements of the science or art which is demanded by their profession. The number of students in these schools is 10,597. If to these be added the students in other and higher professional schools the total number of persons annually instructed in Belgium in the industrial way is over 25,000. The population of Belgium being 5,853,278, the proportion of the population in professional schools is 4.2 per thousand. At Brussels, Ghent, and Charleroi the proportion is 1 in 100 of population.

England is in the same category with Belgium. At London the People's Palace has 7,000 students, the Polytechnic Institute 9,000, at Birmingham the Midland Institute has 10,000. In Holland the number of industrial schools is 32, that of professional schools 25, and the attendance 7,000, in other words, 2 persons in every thousand are in attendance. Switzerland has 87 schools with 8,000 pupils, not counting in the realschulen and others. Attendance on these schools is, in many cases, made obligatory. In Denmark there are 77 schools with 6,000 students, the proportion to the population being 3 in 1,000. In Sweden there are 28 schools, that of Stockholm has 800 students, more than 5 in every 1,000 of the city's population. In Italy there are 136 industrial or art schools with 16,274 students. At Hamburg the industrial school contained 3,200 pupils, or 8 per cent of the city's population.

The types of this class of schools are numerous and vary with their environment. In Germany it seems to me that the programmes give art a preponderating place even in the centers of great metallurgic or textile industries, and that the sciences are taught only in their elements. The same is true according to my observation in Belgium, Holland, Switzerland, and Austria. In England, on the contrary, the organization of the course tends in the direction of the pure and applied sciences rather than in that of art. The technical schools with well organized laboratories of chemistry, physics, and electricity, with shops for work in iron and wood, are in greatest number. According to the most recent figures there were 112,808 pupils in technical classes, and 77,364 in art classes.

The Hamburg school is, in my opinion, the most perfect institution of its kind existing in Germany, as well from the point of view of the principles which caused its establishment, as from those of administration and instruction. It has served as a model for the majority of the German schools. Upon entering the school every pupil, if he is not yet a mechanic as sometimes happens, must choose a trade. Many corporations of mechanics have inserted in their constitution that the director of an establishment must send the apprentice to school for at least eight hours a week. Moreover, a law of the Hamburg Senate, passed in 1864, imposes the duty upon every director of an industrial establishment to send his apprentices to school during six hours a week.

The duration of the studies is not fixed by rule, the students must remain in the school for six months, but after that they may remain for two, three, four, or five years even, according to their tastes and their aptitudes; in brief, they leave only when they think they know enough to work at their trade with advantage. The session is from 6 to 10 p. m. The first half of the first year is given up exclusively to the study of the elementary principles of drawing. Copying is rigorously forbidden; all drawing must be from nature. The second half of the first year is partly devoted to professional drawing. As soon as the student has acquired the ability to draw he is put to work upon drawing objects which belong to his profession. The following years the professional drawing proceeds pari passu with general artistic instruction. With the exception of the theoretical courses, collective class instruction is not permitted. Each student receives a personal, intimate, and varied instruction according to his temperament and his aptitudes. The master is constantly in the study rooms, and constantly inspects the work of the student, advising and criticising him freely. Punishment and prizes are unknown. The discipline is severe, but it is not by general orders. Each student is habituated to conduct himself in a serious manner and to consider the work as a social duty and not as an instrument of puerile ambition. The idea of giving the tuition without charge has been pushed aside with dis-

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dain as antidemocratic and as calculated to hurt the organization of the school. It is thought, very justly, that the tuition fee is an excellent, even infallible, means of interesting the children and parents in the attendance on the course.

The most typical and complete institution of this kind in Belgium, where industrial instruction has had an immense development, is that at Charleroi. It is not only an elementary industrial school, but a sort of higher institution for journeymen and apprentices. The course of instruction touches upon all the industries of the region. In view of its double object the school of Charleroi has two kinds of courses, to wit, the evening course, which has a session every evening of the week from 7 to 9 during the whole year, and the Sunday course, from 9:30 a. m. to 12:30 p. m. The evening course is elementary, the Sunday course in a certain way a higher course, since it is intended to supplement the instruction received during the week in the evening school, or the local day schools of Charleroi.

The curriculum of the evening course consists of French, commerce, physics, arithmetic, geometry, chemistry, linear drawing (figures and ornament), and to draw from plaster casts. The curriculum of the Sunday course comprises commerce and bookkeeping, arithmetic, geometry, physics, chemistry, topography (land and mining surveying), steam engine, electricity, building and architecture, forging, coal mining and engineering, linear, figure and ornamental, drawing from casts and modeling. The student may choose the course which suits him, provided he has the ability to follow it with profit. A certificate, however, is only delivered to those students who have followed the course for two years at least, and have passed a thorough examination upon all the studies that they have pursued. I visited this school one Sunday when the ground was covered with snow and witnessed a scene that touched me deeply. Eight hundred pupils, young and old, employers and employés, were assembled, and were listening to the discourse of the master, or were engaged in study, as stoically indifferent to the chilly temperature as they had been to the seductions of the saloon. Many of them had risen before daylight, had traveled for hours through the snow to attend the lesson of their professors—engineers or directors of mines, doctors of science, or other distinguished university people—to learn arithmetic, geometry, physics, chemistry, and to pay for the instruction they receive.

In England these complementary schools for the education of the apprentice form the type most in vogue. There is not an industrial center, however small, which does not possess one, and the great centers have many. I will add even that in reality these are the only industrial schools that really exist and that render real service to the national industries (J'ajouterai même qu'en réalité ce sont les seules écoles qui existent sérieusement et qui rendent de réels services aux industries nationales). The day schools, with few exceptions, are luxuries (écoles de pur luxe), which are especially for young people who desire to enter upon a liberal career, for amateurs, and for persons whose time hangs heavy on their hands (oisifs). The attendance at the day schools is scarcely a twentieth of that of the evening schools.

The great schools of the kind now under consideration that I have studied with care are the school of the People's Palace at London, which contained in 1889, 5,500 students; the school of the Polytechnic Institute at London, with 7,000 students; the Technical School at Finsbury, with 1,000 students; the school of the Birmingham and Midland Institute, with 3,527 students; the Heriot-Watt College at Edinburgh, with 2,000 students; the Technical School of Manchester, with 500 students; the Technical School of Bradford, with 352 students. The instruction given in these schools is very thorough and of a higher order. To follow the course profitably it is thought that the student should be versed in the elements of art and science. But this requirement is not enforced and those who can not follow the regular course are taught in preparatory classes. Industrial science figures largely in the programmes, and to complete the theoretical instruction laboratories and shops have been fitted up with extraordinary completeness. In the case of great industrial centers having a predominating industry care has been taken to specialize the instruction. Thus I have found at the Birmingham and Midland Institute a real school of metallurgy, with laboratories, forges, etc.; at Bradford there is an evening technical school for the drapery industry; at Manchester, a school for spinning and weaving; at Glasgow, a veritable school of marine engineering.

Beside these schools where technical and industrial instruction preponderates or almost excludes any other, there exists a class of evening schools where the pupil learns drawing, painting, sculpture, modeling, etc. These are intended particularly for journeymen and apprentices in trades in which art plays a great rôle. These schools are numerous and flourishing. Each city possesses one.

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The organization of these English technical and art schools presents the interesting peculiarity that I noted at Charleroi, to wit, the use of the same building by the day and evening schools, the teaching corps being common to both. This is very economical. The social results are immense. The evening schools that are attended exclusively by apprentices and journeymen come out in strong relief by their fusion with the day schools of high and low degree. The evening school is no more a philanthropic enterprise which brings the young and old together whose intellectual developement would otherwise cease, but it is an institution of a high order in which the student must pay for what he receives. The journeymen, the apprentices, the son of the owner and the children of the bourgeoisie are brought together in public and both are honored by having been students in the same institution, and the social harmony increases.

SPECIAL PROFESSIONAL SCHOOLS.

Above the schools for journeymen and apprentices, are the special-profession schools which have the object of educating foremen and other higher employés. They are true higher schools of industry. The great schools of this class that I have studied are:

In Germany: The weaving school of Crefeld (founded in 1855, thoroughly reorganized in 1881); the metal-working school at Iserlohn (1879); the mining school of Bochum (founded in 1844 and afterwards reorganized); the school of iron and steel industries at Remsheid (1880), and the woolen-industry school at Aix la Chapelle.

In Switzerland: The weaving school at Zurich, and the school of embroidery and lace at St. Gallien.

In England: The Bradford technical college, the weaving and spinning school at Manchester, and the technical school of the City and Guilds of London Institute.

In this type of institutions general and artistic instruction holds a great place, which is not the case, as we have seen, in the industrial and technical night schools. Those who attend these schools are neither journeymen nor apprentices, but young people who desire to occupy a higher rank in the industrial hierarchy, as foremen or superintendents. They study what I will call the industrial humanities.

The most complete school and the best in its organization as to matters of instruction and equipment is the Crefeld Weaving School. The school, in the first place, is something more than its name indicates. Its real mission is to train, by a professional, theoretic, and practical instruction and by a solid artistic education, weavers, foremen, silk dealers, and industrial designers for the textile industry. The programme includes the study of drawing and painting; the examination and separation of all the tissues—silk, cotton, linen, etc.; the practice and analysis of all the manipulations and transformations that they undergo before and after weaving; the theoretical and practical study of all the systems of mechanical and other trades; all the modes of fabrication; all the motors employed in the weaving industry; the appearance and the color of goods; industrial bookkeeping and commercial geography. The course, which covers two years, is conducted by fourteen teachers. Practical work alternates with theoretical and artistic instruction. The school contains for these purposes weaving shops with eighty mechanical or hand looms (metiers) with all the accessories, laboratories of chemistry, of dyeing, and printing, and a complete museum of ancient and modern cloths. After spending two years in the school the studious and intelligent student has received a complete professional instruction in weaving, and is able to become an overseer in a shop, a designer, or a commercial agent of the first order. In addition an artistic education has given him the love of the beautiful, of the works of the masters, and a desire for new ideas (la curiosité d' dées nouvelles .

The schools of Iserlohn, Remscheid, and Aix la Chapelle, were founded on the same principles, and present an organization but slightly different. They are, as is the Crefeld school, true special schools for the officers of industry.

The Technical School of Bradford and the Weaving School of Manchester have not the same general character of technical and artistic instruction. Their course is less complete and less elevated. I think that I may justly denominate them as preparing the under officers of industry. In England the dogma in matters of technical instruction, "theory in the school, practice in the shop," is applied to directors as well as to the journeyman. I am not inclined to blame the English in this, though I admire so much and recommend the Crefeld school.

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SCHOOLS OF DECORATIVE ART.[1]

[SCHOOLS OF INDUSTRIAL ART, SCHOOLS OF DRAWING, SCHOOLS OF ART.]

In the third class come the schools of drawing and art, schools of decorative art, or schools of industrial art. These constitute, so to speak, the higher instruction of art applied to industry. They may be placed in three divisions which have no definite line of demarcation.

England, Germany, Russia, Austria, Sweden, and Denmark unite in distinguishing between high art and industrial art, between academic art and factory art, but Belgium is more advanced, and the old academies of Anvers and of Brussels are radically transforming their instruction. During the first year of the course the students receive instruction in drawing and geometry, the course being preparatory. In the following year the students find themselves called upon to choose the profession of an artist, sculptor or architect. To aid them a synoptic table has been gotten up which indicates the industrial branches "which are derived from each of these general divisions." It was thought that a specialization should be made at the beginning of the second year as giving point to the study of art. Experience had shown that two-thirds of the students formerly abandoned the academies before accomplishing anything because they were impressed with the inutility of the long course in art for their profession. The old system of generalization of the studies had the defect of sending off the student in quest of pure art without application to industry, and thus made very bad painters, sculptors, and architects of them.

II. *Organization and administration.*

SUPPORT.

In Germany the interlocution of the state in the support of these schools is manifested in many ways. When it is a cofounder it furnishes collections, tools, and furniture. When it is simply a participant it gives a fixed sum for a determined period. Finally the schools whose foundation it has caused (provoqué), therefore called royal, are inscribed as beneficiaries on the state budget. The municipalities make an annual appropriation and sometimes provide the building. The workingmen's and the professional schools generally receive no support from the state and are generally supported by the communities in which they are located, with the aid of societies and individual benefactors.

In Belgium the municipality is at the head of the school movement. It either takes the initiative or adopts a school founded by private societies as soon as their public utility has been shown. The state appears in the affairs of the school only as it makes appropriations, which, however, are always liberally accorded. The schools preserve their own autonomy, the state is only concerned with results, and if they are satisfactory the appropriation is continued. The municipality in giving recognition to schools founded by societies leaves to the society the management of the school, the appointment of the professors, the budgets, and the course. The municipality only administers directly the communal schools, but even in them a great deal of independence is given to the directors.

In Holland, with four or five exceptions, every industrial, art, or professional school has been founded by societies which direct them in a perfectly independent manner. The state, province, or municipality grants them aid.

In Denmark, Sweden, and Norway the most active rôle is played by private enterprise in the creation of institutions for the development of technical and art instruction. The state and municipality grants aid, but does not absorb their individuality.

In Russia almost all the schools have been founded and are supported by societies. The activity of the state is almost nil.

In Austria-Hungary every school is under the minister of public instruction or of commerce, according as they are technical or art schools.

In Switzerland the schools are generally founded and administered by the municipality. The Federal Government grants aid, which varies according to the more or less national or local character of the institution.

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[1] The remaining part of M. Vachon's report is given in abstract.

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In Italy all the schools are the creations of societies of artists and of mechanics. So far from being supported, the schools have been opposed by the state and municipality. Now the state has laid its hand upon them all and leaves them but comparatively little independence. The municipalities make them liberal grants and intervene in their administration.

In England the state has up to the present left the matter entirely to the municipalities, societies, and individuals, the National Normal School of the South Kensington Museum being the only exception. For the most part the schools are the creations of societies who manage them and endeavor to make them self-supporting with the aid of contributions from private and public purses. Every municipal school should have a governing board at its head of five members chosen from the inhabitants of the town. The state never interferes in the administration of the municipal or private schools, except so far as to require from all schools that desire to share in the public appropriation, to recruit its teaching corps from among the professors holding the diploma of the South Kensington School. This public appropriation to the schools of science and art of the Kingdom by means of an annual competition is large but variable.

TUITION.

In England the system of gratuitous instruction is resolutely excluded as injurious. Scholarships are given after a very severe examination. In Germany it is the same, though scholarships are given to poor students. In Denmark, Sweden, and Norway even scholarships are not given. In Holland nearly every school is a pay school.

In Belgium there is a mixed system and there are as many gratuitous as pay schools. Some schools require some pupils to pay while other pupils are educated free. At Charleroi the tuition is repaid at the end of three or four years to students who have obtained a diploma.

COST.

Country.	Schools.	No. of students.	Per capita cost.
Germany	Weaving School of Crefeld (shops, laboratories, etc.)	250	$74
	Industrial School of Hamburg	3,200	10
	School of Decorative Arts, Berlin	500	20
Switzerland	School of Industrial Arts, Geneva	200	10
	Municipal School of Art and Industry, Geneva	58	30
	Watchmakers' School, Geneva	112	9
	Industrial school of Zurich	350	9
Belgium	Industrial School at—		
	Charleroi	860	7
	Ghent	1,285	8
	Anvers	300	13
	School of Decorative Art and Academy of Fine Arts, Brussels.	686	44
	School of Decorative Art, Ixelles, Brussels	300	16
	Professional School of Wood, Tournay, shops, etc	150	21
Holland	School of Decorative Arts, Amsterdam (without board or lodging).	32	325
	School of Fine Arts, Amsterdam	90	20
	Ambats School, Amsterdam (shops)	250	37
	Academie of Liberal Arts, at The Hague	400	23
	Ambats School, at The Hague (shops)	120	46
	School of Industrial Art, Harlem	200	25
Denmark	Public schools of art and industry (average)	6,000	8
England	Normal School of South Kensington	563	22
	School of Art, Manchester	452	29
	School of Art, Birmingham	735	46
	Higher Technical School of London	431	100
	Finsbury College, London	1,217	33
	Technical School, People's Palace, London	5,500	28
	Technical School, Birmingham (shops)	308	28
	Technical School, Manchester (shops, laboratories)	600	75
	Bradford Technical College (shops and laboratories)	1,500	20
	Artane Industrial School, Dublin (board and lodging)	800	105

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III.

COURSE IN MINING ENGINEERING.

The features which distinguish the course in mining engineering from that of civil engineering become apparent on comparing the course of the Massachusetts Institute of Technology given below with the civil-engineering course given at page 952. Laboratory work is especially prominent. In brief, the mining engineer is a civil engineer who operates beneath the surface of the earth and a chemist whose specialty is metallurgy. The Massachusetts Institute of Technology has a special laboratory for the students of this course, called the Cummings Mining and Metallurgical Laboratories. The institute is careful to anticipate the common criticism that work in such a laboratory is no substitute for the experience gained in larger works; for the object of its laboratory is to prepare students for such experience, to instil the spirit of investigation, and to emphasize the process given in the text-book. The mining laboratory consists of three parts—milling, furnace, and assay rooms. To bring the student into still more intimate connection with their specialty, summer schools of mining and metallurgy are organized for the study of mines, mills, smelting works, and geological fields. In 1890 the school, consisting of twelve students, spent a month at work—mining, setting timbers, and surveying underground—in the iron mines at Ishpeming, Mich. Next year instead of a mining a metallurgical school will be organized.

Mining engineering at the Massachusetts Institute of Technology.

Subject.	Lect., Rec., Lab., Draw., or Field.	Instructor.	Year.	Term.	Number of weeks.	Hours per week.
Blowpipe silver assay	Lab	Richards	2	1	15	2
Mining engineering	Lect	Richards, Hoffman	3	1, 2	30	3
Assaying by fire	Lab	Richards, Lodge	3	2	15	4
Metallurgy of iron	Lect	Richards	4	1	15	1
Metallurgy	do	Richards, Hoffman, Howe.	4	1	15	2
Mining	Lab	Richards, Lodge	4	1	15	8
				2	15	12
Mining and metallurgy	do	do		1	15	8
			4	2	15	12
Ore-dressing	Lect	Richards	4	1	15	1
Metallurgy	do	Richards, Hoffman	4	2	15	3
Drawing	Draw	Richards	3	1	15	2
			4	1	15	1
Memoirs	Read	Richards, Hoffman	4	1, 2	30	2

As at the Massachusetts Institute the civil-engineering course is the starting point for the other technological courses, and at the Rose Polytechnic the mechanical engineering course is the basis of the other courses; so has the school of mines of Columbia College been developed into a general school of technology. Owing to lack of information, however, it is necessary to pass by this very important school and to let the Michigan Mining School represent the class now under consideration. It is hardly necessary to remark that the school is situated in the northern or mineral-yielding portion of that State. The school has been in existence only a few years, having been established in 1886.

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Curriculum of the State Mining School of Michigan.

Study.	Fall term.	Winter term.	Spring term.	Summer term.	Total hours.
First year					1,575
Higher algebra, trigonometry, and analytical geometry	70	70	30	0	170
Drawing	126	140	0	0	266
Surveying	0	42	0	385	427
Physics	70	70	120	0	260
Chemistry	56	0	0	0	56
Mineralogy and lithology	112	112	0	0	224
Petrography	42	42	0	0	84
Palæontology	14	14	0	0	28
Machine-shop practice	0	0	60	0	60
Second year					1,470
Calculus and mechanics	70	70	0	0	140
Drawing and graphical statics	84	84	0	0	164
Machinery and properties of materials	28	28	140	0	196
Chemical analysis	210	182	0	0	392
Metallurgy	28	28	0	0	56
Mining and mine surveying	0	28	70	0	98
Stratigraphical geology	28	28	0	0	56
Physical geology	42	42	0	0	84
Practical work	0	0	0	280	280
Third year					1,400
Engineering design	84	84	0	0	168
Chemical analysis	168	168	0	0	336
Metallurgy	28	28	0	0	56
Assaying	0	0	70	0	70
Ore dressing	14	14	140	0	168
Structural engineering and mechanics of materials	28	28	0	0	56
Mechanical engineering	28	28	0	0	56
Electrical engineeering	28	28	0	0	56
Mining engineering	28	28	0	0	56
Hydraulic engineering	14	14	0	0	28
Economic and field geology	70	70	0	210	350

One of the oldest and certainly one of the most renowned mining schools of Europe is the Bergakademie at Freiburg, in Saxony. In this institution there are four courses, to wit, for mining engineers, mining surveyors (markscheider), metallurgical engineers, iron-smelting engineers. To show how this specialization is made the curricula of the four courses are given side by side:

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FOR MINING ENGINEERS.		
Studies.	Hours a week.	
	Lecture.	Exercises.
First year:		
Higher mathematics (part 1)	6	0
Descriptive geometry	3	2
Spherical trigonometry	a 2	0
Physics	6	1
Inorganic chemistry	4	0
Mineralogy	5	0
Crystallographic practicum	------	a 1
Topographical drawing and sketching.	0	2
Second year:		
Higher mathematics	2	0
Mechanics	6	1
Mining (1 part)	5	0
Geology	5	0
Palæontology	2	0
Study of strata and fossils	0	a 2
Mineralogical practicum	0	2
Physics (practicum)	0	2
Blowpipe assaying	2	2
Computative and graphical exercises in mechanics.	0	4
Third year:		
Geodesy and mine surveying (part 1).	3	0
Geodetic practicum	0	b 2 / a 6
Mining (part 2)	5	0
Machines	4	0
Strata	3	0
Metallurgy	4	0
Building construction	3	0
Computative and graphical exercises in machine construction, etc.	0	4
Fourth year:		
Geodesy and mine surveying (part 2).	3	0
Surveying practicum	0	6
General law	b	0
Mining law	a 4	0
Sketches of mining and smelting works.	4	0
Mining and metallurgical book-keeping.	1	0
Mining and metallurgical statistics.	b 1	0
Political economy	b 3 / a 2	------
Mining and smelting hygiene	2	------
Electricity	2	a 2

FOR MINING SURVEYORS.		
Studies.	Hours a week.	
	Lecture.	Exercises.
First year:		
Higher mathematics (part 1)	6	0
Descriptive geometry	3	2
Spherical trigonometry	2	0
Physics	6	1
Mineralogy	5	0
Mining (1 part)	5	0
Topographical drawing and sketching.	0	2
Second year:		
Geodesy and mine surveying (part 1).	3	0
Geodetical practicum	0	b 2 / a 6
Higher mathematics (part 2)	2	0
Mining (part 2)	5	0
Geology	5	0
Mechanics	6	1
Third year:		
Geodesy and mine surveying (part 2).	3	0
Mine-surveying practicum	0	6
Strata	3	0
General law	b 4	0
Mining law	a 4	0
Political economy	b 3 / a 2	0

a In summer. b In winter.

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FOR METALLURGISTS.		
Studies.	Hours a week.	
	Lecture.	Exercises.
First year:		
Higher mathematics (part 1)	6	0
Descriptive geometry	3	2
Physics	6	1
Inorganic chemistry	4	0
Mineralogy	5	0
Mining (part 1)	5	0
Topographical drawing and sketching.	0	2
Second year:		
Higher mathematics (part 2)	2	0
Mechanics	6	1
Mining (part 2)	5	0
Geology	5	0
Mineralogical practicum	0	2
Physics (practicum)	0	2
Blowpipe assaying	2	2
Qualitative chemical analysis.	1	(*d*)
Chemical technology	2	0
Computative and graphical exercises in mechanics.	0	4
Third year:		
General metallurgy	4	0
Machines	4	0
General law	*b* 4	0
Mining and metallurgical bookkeeping.	1	0
Mining and metallurgical statistics.	*b* 1	0
Qualitative chemical analysis.	1	(*d*)
Geodesy and mining surveying (part 1).	3	0
Building construction	3	0
Computative and graphical exercises in machine construction.	0	4
Production of salt	*a* 1	0
Fourth year:		
Shot, pen, and typemaking, etc.	*a* 1	0
Foundry work and smithing, etc.	2	0
Assaying	0	1
Mass analysis	0	*b* 2
Gas analysis	0	*a* 2
Iron smelting	4	0
Firing	1	0
Electricity	2	*a* 2
Sketches of mining and smelting works.	0	4
Hygiene of mining and smelting work.	2	0
Political economy	*b* 3 *a* 2	0

FOR METALLURGISTS IN IRON.		
Studies.	Hours a week.	
	Lecture.	Exercises.
First year:		
Higher mathematics	6	0
Descriptive geometry	3	2
Physics	6	1
Inorganic chemistry	4	0
Mineralogy	5	0
Mining (part 1)	5	0
Topographical drawing and sketching.	0	2
Second year:		
Higher mathematics (part 2)	2	0
Mechanics	6	1
Mining (2 part)	5	0
Geology	5	0
Physics (practicum)	0	2
Blowpipe assaying	2	2
Qualitative chemical analysis.	1	(*d*)
Computative and graphical exercises in mechanics.	0	4
Third year:		
Iron smelting	4	0
General smelting	4	0
Machines	4	0
Qualitative chemical analysis.	1	(*d*)
Geodesy and mine surveying (part 1).	3	0
Building construction	3	0
Computative and graphical exercises in machine construction.	0	4
Firing	1	0
Political economy	*b* 3 *a* 2	0
Fourth year:		
Shot, pen, and typemaking, etc	*a* 1	0
Foundry work and smithing	2	0
Assay of iron	*b* 1	(*c*)
Gas analysis	0	*a* 2
Location of iron smelting works.	1	0
Sketches of mine and smelting works.	0	4
General law	*b* 4	0
Mining and metallurgical book-keeping.	1	0
Mining and metallurgical statistics.	*b* 1	.....

c One afternoon. *d* Daily.

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IV.

ELECTRICAL ENGINEERING.

Just as mining engineering is a specialty of civil engineering, so electrical engineering may be considered as a specialty of mechanical engineering; for "generation of steam" write "generation or collection of electricity," for "boiler" write dynamo, and the difference is reduced to a minimum. The main feature of difference, then, is not in the study of the art of applying the energy when generated, but in the theoretical and scientific study of the energy itself. However, there is another feature connected with electricity that is not in anyway connected with mechanical engineering unless the setting up of apparatus and construction of lines be also called such, and that is electric lighting.

During the ten or twenty years last past the development of the study of electricity and the application of it as an illuminating and motive agent has shared with the discoveries in organic chemistry the honor of public attention and applause. So responsive have our schools of higher education become to the growth of science, that already many courses of biology have been instituted and several courses in electrical engineering.

In the Massachusetts Institute the course of electrical engineering is made up in its technical features from the subjects composing the physics or mechanical engineering departments. On pages 968, 969 is given in parallel columns the course of mechanical engineering at the Rose Polytechnic Institute and the following scheme is for the students of that school who elect electrical engineering instead of the usual course.

ELECTRICAL ENGINEERING.

This course can be elected only by students in mechanical engineering.

	First term.	Second term.	Third term.
Sophomore year.		Electrostatics. Magnetism; elementary laws of magnetism and properties of magnetic substances. Electric currents; their measurements, use of galvanometers. Text-books and laboratory. (3 hours a week.)	Electric units: derivation and definition of quantity, resistance and potential; relations of. Resistance measurements, Wheatstone's bridge, Kirchoff's laws, etc. Text-book and laboratory. (3 hours a week.)
Junior year	Current generators; study of various forms of batteries; polarization and electrolytic resistance. Construction of batteries; care and management of same. Text-book and laboratory. (2 hours a week.)	Electro-magnetism; laws of electro-magnets and their construction, induction; electro-magnetic induction. Text-book and laboratory. (2 hours a week.)	Application of electro-magnetic induction in various operations, and for purposes of measurement, use of condenser in measurement, of insulation and insulation tests. Text-book and laboratory. (2 hours a week.)
Senior year.	Accurate determination of magnetic elements: absolute measurements in magnetism and electricity. The calibration of commercial instruments, and the study of their errors. (3 hours a week.)	Measurement of commercial currents by various instruments and methods, insulation of lines for electric light, telegraph and telephone purposes, arc and glow lamps, photometry, telegraph, telephone, and submarine cable appliances and systems. (3 hours a week.)	Electric lighting and power transmission; study of dynamos and motors as to efficiency, characteristics, etc., using various dynamometers. Design and construction of electrical apparatus and machinery. (6 hours a week.)

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Recent arrangements at Purdue University have put that institution among the first in the country as a school of electrical engineering. A laboratory has been erected that is in itself an institution. The work has been developed from the mechanical engineering course and is identical with it during the freshman and sophomore years. During the junior and senior years the course is as follows:

JUNIOR YEAR.

Technical instruction.

(*a*) *Lectures and recitations, electricity and magnetism.*—Thirty-eight weeks, twice a week. This work thoroughly covers the elementary theory of the subject, and forms the necessary groundwork for the more advanced and technical instruction of the succeeding year. The elements of electrical and magnetic potential receives particular attention. The instruction is by textbook, supplemented by notes.

(*b*) *Laboratory work.*—Thirty-eight weeks, 6 hours a week, consisting during the first term of instruction in the art of physical measurement, and during the remainder of the year in the elements of electrical testing.

SENIOR YEAR.

(*a*) *Dynamo-electric machinery.*—Thirty-five weeks, twice a week. This course consists of the fundamental theory of such machines, of their various forms, and the applications of the same to electric lighting and power. The mathematical theory of electricity is drawn upon so far as found advantageous to the discussion of these machines. Systems of electrical distribution will be investigated, and tests on the continuous and alternating circuits of the department discussed. Each student is expected to produce from time to time a paper giving the results of reading or investigation of some electrical subject.

(*b*) *Laboratory work.*—Thirty-five weeks, 8 hours a week. During the first term the subjects considered will be advanced electrical testing and the standardization of testing apparatus, while the remainder of the year will be occupied with testing dynamos and motors, photometry and electric lighting, together with a practical study of the problems of electric lighting and power, and, finally, practice in electrical designing. Inspections of electric light factories and plants and reports on the same are considered part of this work.

(*c*) *Thesis.*—A thesis giving an original design of some electrical machinery, or an original investigation and discussion of some electrical installation, is required at the end of the course.

This electrical laboratory is a two-story structure of brick and stone, with a tower and ample rooms in the roof. The lower floor is given up almost entirely to electrical work. The second story contains the physical lecture room, offices, drafting rooms, and the like. The institution had a comparatively small electrical equipment at the start, but as soon as the new building was under way extensive importations were made, so that there are now available a rather full set of the best modern testing instruments, and a well appointed dynamo room with all the paraphernalia of commercial measurement.

The main part of the electrical building contains a general laboratory, lecture room, two laboratories for special work in electrical testing, a small laboratory for magnetic and other extremely delicate measurements, a battery room, and a director's office. The dynamo room is in an accessible and well-lighted extension, as far as possible from the laboratories where delicate instruments are in use.

This dynamo room is 27 by 42 feet, and is supplied with half a dozen typical modern dynamos of small size, conveniently arranged for experimentation. Power is furnished by a 22 high-pressure straight-line engine. This is placed at the extreme end of the dynamo room, farthest from the main building, and is coupled directly to a line shaft running nearly the length of the room, and is supported at short intervals by substantial piers. This shaft is very carefully lined up, and carries the driving pulleys for the various machines.

The equipment of dynamos consists of one of the original workshop type of gramme machines, brought to this country at the time of the Centennial Exhibition at Philadelphia, a Thomson-Houston 3-light arc machine, a Brush 4-light arc machine, an Edison 40-light incandescent machine, to which supplementary series coils for compounding have been added, and a Slattery alternator specially designed for experimental work and giving an output of about 10,000 watts. In addition, a compound wound incandescent machine is under construction from designs by the director of the laboratory. This last is a Manchester type machine, with field magnets seated on a gun-metal base. In connection with the alternating dynamo there are converters of Westinghouse, Slattery, Thomson-Houston, and national make. A bank of lamps and a Julien storage battery of 25 or 30 cells are also located in the dynamo room. A Sprague constant-potential motor and a Baxter constant-current motor serve as types of those classes of machines. The testing rooms are fitted with substantial masonry piers independent of the flooring or foundations of the building, and are

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quite free from vibration. The set of testing apparatus was designed to give opportunities for the absolute measurement of resistances and of both alternating and direct currents at all potentials. To this end the equipment includes a well-selected series of standard resistances, two of Sir William Thomson's balance dynamometers and a Weber and a Siemens dynamometer, and two Thomson electrostatic voltmeters, aside from the ordinary apparatus of testing and commercial measurement. The physical lecture room is located over the dynamo room, so that any kind or quantity of current and direct mechanical power are both easily available.

The city of Lafayette, in which the institution is located, has an electrical railroad and two electric light stations, which through the courtesy of the managers are often available for additional instruction and illustration.

V.

ARCHITECTURE.

The readers of one of those romances of Violet le Duc which have an engineering "motif" will remember the answer given by the engineer to the architectural student who asked for the difference between an architect and an engineer. "You ask me a difficult question to answer," was the response; "art has been separated from science and calculation because it is thought that both can not be held in the same brain." However this may be, we have in America but few courses of architecture, those known to the Bureau being at the Massachusetts Institute of Technology, the Lehigh and Cornell Universities, Columbia College, and the University of Illinois. The courses of the two universities last named are given, together with that of the technological university at Hanover.

COURSE IN ARCHITECTURE AT CORNELL UNIVERSITY.

FIRST YEAR.

Instrumental drawing and projection, six hours during winter term; building, surveying, and levelling, spring term; lectures and field work, two afternoons per week.

SECOND YEAR.

Building materials and construction, winter term; lectures three times a week; drawing, six hours a week. Spring term: Lectures and drawing, six hours a week, and each week four hours additional drawing; shades, shadows, and perspective. Spring term: Lectures; drawing, six hours a week.

THIRD YEAR.

History of architecture; lectures, fall and spring terms, three times a week; winter, daily. Drawing, six hours a week. Designing, nine hours a week. Additional drawing and library work in each term, ten hours. First half of spring term: Mechanics applied to architectural construction; lectures three times a week, with drawing as above. Ornament, spring term, twice a week.

FOURTH YEAR.

History of architecture, lectures, fall term, three times a week; winter, twice. Designing, fall and winter terms; lectures, twice a week; lectures and drawing, seven and a half hours a week. Spring term, lectures, twice a week; drawing, four hours additional; drawing and library work, each term, twelve hours per week. Heating, etc., lectures, fall term, three times a week. Stereotomy, lectures, winter term, twice a week, and six hours a week drawing and modelling. Professional practice, spring term, lectures.

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ARCHITECTURAL COURSE AT THE TECHNICAL UNIVERSITY OF HANOVER.

	Hours a week.	
	Lectures.	Exercises.
FIRST YEAR.		
First semester:		
Differential and integral calculus (1 part)	5	1
Analytical geometry (plane and solid)	3	0
Descriptive geometry	3	6
Elements of physics	3	0
Mechanics	3½	½
Elements of mineralogy	2	0
Architectural drawing	0	5
Building construction (1 part)	3	6
Second semester:		
Differential and integral calculus, Part II	3	1
Descriptive geometry	3	6
Elements of chemistry	6	0
Mechanics	7	1
Elements of mineralogy	2	0
Architectural drawing	0	6
Building construction (1 part)	3	6
SECOND YEAR.		
First semester:		
Elements of practical geometry	2	2
Elasticity	5	1
Graphical statics	1	0
Geology	2	0
Landscape drawing	0	2
Figure drawing	0	6
Modelling (1 part)	0	4
Ornament (1 part)	1	2
Agricultural structures	1	3
Development of the styles of antiquity	3	6
Elements of building construction	3	0
Building technology (preparation of materials)	3	0
Second semester:		
Elements of practical geometry	0	3
Graphical statics	0	2
Geology	2	0
Landscape drawing	0	2
Figure drawing	0	6
Modelling (Part I)	0	4
Ornament (Part I)	1	2
Building construction (Part II)	3	3
Agricultural structures	1	3
Styles of antiquity	0	6
Roman style	3	0
Elements of building construction	3	0
Technology of art industries	2	0
THIRD YEAR.		
First semester:		
Water-color sketching	0	2
Drawing from life	0	6
Ornamentation (Part II)	1	2
Arrangement of buildings for private and commercial purposes	2	0
Arrangement of public buildings (palaces, halls, etc.)	2	0
Styles of the renaissances	2	0
Styles of Gothic building construction	3	0
History of architecture	6	0

	Hours a week.	
	Lectures.	Exercises.
THIRD YEAR—continued.		
First semester—Continued.		
General history of art	4	0
Early Christian style	0	3
Sketches and details of dwelling houses	1	5
Statistical computations regarding iron, stone, and wood construction	2	2
German renaissance (optional)	2	----
Æsthetics (optional)	2	----
Second semester:		
Water-color sketching	0	2
Drawing from life (until end May)	0	6
Ornament (Part II)	1	2
Arrangement of private and commercial buildings	2	0
Arrangement of public buildings	2	0
Styles of the renaissance	2	0
Styles of Gothic building construction	3	0
History of architecture	6	0
General history of art	4	0
Exercises in the history of art (Italian renaissance)	0	2
Styles of the early Christians	0	2
Sketches and details of dwelling houses	1	5
Statistical calculations of iron, stone, and wood construction	2	2
Elements of machinery	2	0
German renaissance	2	0
Lightning rods	1	0
Æsthetics	2	0
FOURTH YEAR.		
First semester:		
Modelling	6	0
Plans and estimates	1	0
Sketches in the renaissance style	0	6
Monumental buildings and city parks, with exercises in sketching	1	4
Sketching public buildings	1	10
General history of art	2	0
Special lectures on the history of art	2	0
History of industrial art	2	0
Interior architecture with color decoration	0	7
Elements of machinery	3	0
Heating, ventilating, and lighting	4	0
Second semester:		
Modelling (Part II)	0	6
Plans and estimates	1	0
Sketches in the style of the renaissance	0	6
Monumental buildings and city parks, etc	1	5
Sketches of public buildings	1	10
General history of art	4	0
Special lectures on the history of art	2	0
History of industrial art	2	0
Interior architecture with color decoration	0	7

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COURSE IN ARCHITECTURE (LEADING TO THE DEGREE OF B. S.) AT THE UNIVERSITY OF ILLINOIS.

FIRST YEAR.

1. Advanced algebra, projection drawing, French or German, shop practice.
2. Trigonometry, descriptive geometry and lettering, French or German, shop practice.
3. Analytical geometry, advanced descriptive geometry, French or German, shop practice.

SECOND YEAR.

1. Differential calculus, physics, French (optional), wood construction.
2. Advanced analytical geometry, physics, French or German (optional), stone, brick, or metal construction.
3. Integral calculus, physics, French or German (optional), sanitary construction.

THIRD YEAR.

1. Analytical mechanics, chemistry, architectural drawing.
2. Resistance of materials, chemistry, history of architecture, architectural drawing.
3. Graphic statics, history of architecture, astronomy or geology, or drawing or modeling.

FOURTH YEAR.

1. Mental science, æsthetics of architecture, architectural perspective.
2. Constitutional history, designing, heating and ventilation.
3. Political economy, designing, estimates and specifications.

BUILDERS' COURSE (1 YEAR).

1. Wood construction, projection drawing, shop practice (carpentry and joinery).
2. Stone, brick, and metal construction, architectural drawing, shop practice (stair-building)
3. Graphical statics, architectural designing, shop practice (cabinet- making).

VI.

CHEMISTRY.

Until now the subject of engineering has occupied attention, but we have arrived at a subject which being neither engineering nor agriculture, but being common to both will serve as an excellent transition from the one to the other. Before illustrating what a course of professional chemistry is, let us make a distinction for the sake of convenience, though the distinction perhaps is obvious enough. The assayist is a chemist with a specialty, the dyer is also a chemist with a specialty; but their methods, places of activity, and materials are very different. But beyond these specialties there is the chemist whose sphere is general consultation and analysis, the professional chemist. The practical or rather laboratory character of the course in applied chemistry is well shown by the chart representing the programme of the course for "technical chemists" at the Hanover University, whose excellent catalogue we now draw from for the last time.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8-9...	Laboratory.	Laboratory.	Laboratory.	Laboratory.	Laboratory	
9-10..						Mechanical.
10-11..						Physical laboratory.
11-12..				Building construction.		
12-1...	General technology.	General technology.	Building construction.	General technology.	General technology.	
3-4...	Laboratory.	Laboratory.	Laboratory.	Laboratory.	Laboratory.	
4-5...						
5-6...			Political economy of industry.		Political economy of industry.	
6-7...			Element of electricity.	Element of electricity.		

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Returning to the consideration of American schools we find that the chemically technical part of the course of chemical engineering at the Massachusetts Institute is given during the third and fourth years. Here again laboratory work predominates.

Chemistry.

Subject.	Lect., Rec., Lab., Draw., or Field.	Instructors.	Year.	Term.	Number of weeks.	Hours per week.
Industrial chemistry	Lect	Norton	3	1, 2	30	2
Organic chemistry	Lect	do	4	1, 2	30	2
Do	Lect	do	3	1	15	1
Industrial chemistry	Lab	Norton, Smith	4	1	15	12, 4
Do	Lab	do	3	2	15	5
Textile coloring	Lab	do	4	1	15	6
Applied chemistry	Lect	Norton	4	1, 2	30	1
Gas analysis	Lab	Drown, Gill	4	1 or 2	15	1

More specific in its indications, the course of applied chemistry of the School of Mines of Columbia College shows the same concentration of the technical work during the third and fourth years, and places the work under four heads, to wit, chemical manufactures, food and drink, clothing, and fertilizers The course is as follows:

In the second year.

(For all students.)

1. Air: nature, sources of contamination, sewer gas, plumbing, draining, disinfection, ventilation.
2. Water: composition of natural waters, pollution, disposal of sewage and house refuse.
3. Artificial illumination: candles, oils, and lamps, petroleum, gas and its products, electric light.
4. Photography.
5. Limes, mortars, and cements.
6. Building stones: decay and preservation.
7. Timber and its preservation: pigments, paints, essential oils, varnishes, preserving processes.
8. Glass and ceramics.
9. Explosives: gunpowder, gun-cotton, nitroglycerine, etc.
10. Electro-metallurgy.

In the third and fourth years.

(For students in the course of analytical and applied chemistry.)

1. Chemical manufactures: acids, alkalies, and salts.
   - (*a*) Sulphur, sulphurous acid, hyposulphites, sulphuric acid, bisulphide of carbon, etc.
   - (*b*) Common salt, soda ash, hydrochloric acid, chlorine, binoxide of manganese, bleaching powder, chlorates, chlorimetry, etc.
   - (*c*) Carbonate of potash, caustic potash.
   - (*d*) Nitric acid and nitrates.
   - (*e*) Iodine, bromine, etc.
   - (*f*) Sodium, aluminum, magnesium.
   - (*g*) Phosphorus, matches, etc.
   - (*h*) Ammonia salts.
   - (*i*) Cyanides.
   - (*j*) Alum, copperas, blue vitrol, salts of magnesia, baryta, strontia, etc.
   - (*k*) Borates, -stannates, tungstates, chromates, etc.
   - (*l*) Salts of mercury and silver.
   - (*m*) Oils, fats, soaps, glycerine.
2. Food and drink: milk, cereals, starch, bread, meat, tea, coffee, sugar, fermentation, wine, beer, spirits, vinegar, preservation of food, etc.
3. Clothing: textile fabrics, bleaching, dyeing, calico printing, paper, tanning, glue, india-rubber, gutta-percha, etc.
4. Fertilizers: guano, superphosphates, etc,

But specialized as these courses are they are of a less special nature than the course which follows:

CURRICULUM OF THE ROYAL (SAXON) PROFESSIONAL SCHOOL FOR SOAP-MAKERS AT CHEMNITZ.

FIRST COURSE (WINTER HALF YEAR).

[NOTE.—The instruction of this course is common to the students of the dyeing school and of the soap-makers school.]

1. General chemistry (12 hours). Dr. Bornemann. Fundamental principles, the more important elements and their compounds. Introduction to organic chemistry, especially the carbon compounds.

2. Physics (4 hours). Dr. Kollert. General properties of bodies; the different forms of structure and the more important principles of equilibrium and the movement of solid, liquid, and gaseous bodies.

3. Arithmetic (6 hours). Dr. Wend. Fundamental principles, common and decimal fractions, proportion, powers and roots, and equations having one or more unknown quantities.

4. Geometry (2 hours). Dr. Vetters. The essentials (Hauptsätze) of planimetry. Computation of areas and contents.

5. Free-hand drawing (4 hours). Mr. Schneider. Cultivation of the eye and hand to correctly represent simple forms and ornaments in clear outlines after copies or plaster paris models.

6. German (4 hours). Mr. Loereusen. Exercises in oral and written, expression of thought through composition and impromptu remarks. The more important points of grammar based on the reading book.

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SECOND COURSE (SUMMER HALF YEAR).

7. Chemical technology (4 hours). Prof. Dr. von Cochenhausen. Water (rain, spring, river), hard and soft, cleansing for use in industry, etc. The important materials used by the soap-maker, common salt, soda, potash, and caustic alkalies, acids, etc. Heating materials, fire places.

8. Technical chemistry, 1 part (2 hours). Dr. Bernemann. The important organic elements and compounds for soap-making, especially the fats and their constituent parts. Coloring matter and perfumery used in soap-making.

9. Practical chemical work in the laboratory (16 hours). Prof. Dr. von Cochenhausen. Exercises in qualitative analysis. Exhibit of preparations. Exercises in easy quantitative determinations. Ascertaining value of the soda, etc. in soap.

10. Physics (2 hours). Dr. Kollert. Theory of heat.

11. Free-hand drawing (2 hours). Mr. Kühn.

12. German (4 hours). Mr. Walther. Exercises in style in relation to business composition and technological description, etc. Exercises in making impromptu remarks, the drawing up of minutes of a conversation, etc., and the more important period of German literary history.

13. Bookkeeping (2 hours). Mr. Meyersieck. Exercises in keeping the important account books. Peculiarities of business affairs under the influence of the laws governing trade, etc.

THIRD COURSE (WINTER HALF YEAR).

14. Technical chemistry, second part (6 hours). Dr. Bornemann. Extracting and cleansing fat, its qualities, the indispensable apparatus and machines for house and toilet soap making, different kinds of soaps, perfumery, candle-making, examination of fats and soap.

15. Practical chemical work in laboratory (20 hours.) Prof. von Cochenhausen. Qualitative and quantitative analysis. Testing and valuing soap, fat, etc. Exercises familiarizing the student with the character of the important fats and soaps, etc.

16. Free-hand drawing (2 hours). Mr. Schneider.

17. German (2 hours). Mr. Walther.

In addition the students of the second and third classes may take the following subjects in the foreman's school.

18. Management and conduction of water (2 hours, summer).

19. Electricity (2 hours, summer).

20. Electrical technology (3 hours, winter).

21. Extinguishing fires (2 hours).

22. Selected discussions on political economy.

VII.

AGRICULTURE.

Two ideas, not mutually exclusive, though in a measure antagonistic, have dominated in the formation of the curricula of the colleges endowed with the national land grant of 1862—the education of the farmer's son; the education of the boy for a farmer. The intent of Congress is sufficiently clearly expressed to leave no doubt as to what was meant by the caption of the act when it recites that it is "for the benefit of agriculture and the mechanic arts." But an act of Congress can not create a professional corps such as have the American classic colleges, or even some schools of engineering, and schools of analytical chemistry had at the date of 1862. Liebig's theories had not yielded to those of a new luminary in biological chemistry just then appearing in France. Biology as now understood was unborn, and the theoretical instruction of the German polytechnicum or the mathmatical instruction of the École Polytechnique of Paris were the models for American schools whose object was to teach industry. Besides this there was the heaviest handicap of all—the meager mental training in literary matters possessed by those who were to attend these schools. Under such circumstances the makers of their programmes were swayed to adopt methods and studies familiar to them, and in view of the limited education of those who applied for admission to adapt their programme to the purpose of educating the country boy, and also to educate him as much as possible for the farm. To the complaint that in doing this the school educated the boy away from the farm, Prof. Clute, president of the Michigan Agricultural College, answers that 36 per cent of the graduates are engaged in farming, to say nothing of the 11 per cent engaged in industrial pursuits or teaching in agricultural colleges, nor of the number who do not graduate.

The curriculum of the American agriculture school is therefore not a university course of study, but by the necessities of its situation has been compelled to take refuge in that scheme of instruction which, in its extremest classical form, was worked out by John Sturm, in Germany, in the sixteenth century; by the Jesuits, in France, during the seventeenth, and was modified by the ideas of Hecker, the founder of the German scientific school (Realschule), and the pedagogics of the French revolution in the eighteenth. It might be shown how this ideal of an education based on science found expression in the university of Thomas Jefferson as the education founded on the classics found an expression in the university of the Puritans and an education based on research found expression in that of Johns Hopkins.

The course of agriculture naturally follows the composite character of the science. It is broken up into schools of chemistry, horticulture, entomology, forestry, veterinary science, etc. Agriculture proper is usually considered under

the heads of agricultural soils, vegetable life, and animal life. As the requirements for admission and the ideals of the school vary so much, the time devoted to the agricultural topics is not uniform. The course of two institutions challenge attention. Both schools have been founded by private endowment, are situated in New England, and are well calculated to illustrate agricultural instruction as it obtains in the United States, in its higher and in its secondary form.

It is impossible as yet to say what the endowment of the Bussey Institution of Harvard University will be, further than that it is very large. It is a school of agriculture and horticulture, giving systematic instruction in agriculture, useful and ornamental gardening and stock raising, and is especially adapted for the instruction of young men who have been brought up as practical farmers or gardeners, as well as for those who wish to qualify themselves to be farmers or superintendents of farms, country seats, or public institutions or wish to pursue some special branch of agriculture, horticulture, botany, or entomology. The literary courses of the university are open to the student; and surrounding the school, and belonging to it, are 200 acres of excellent land. The school is an agricultural school; its faculty consists of six professors and instructors called, respectively, professor of applied zoölogy, professor of agricultural chemistry, instructor in horticulture, instructor in botany, instructor in entomology, and the director of the Arnold Arboretum. Instruction is given by lectures and recitations and by practical exercises in the laboratories, greenhouses, and fields. The aim is to give the student a just idea of the principles upon which the arts of agriculture and horticulture depend, to teach him how to make intelligent use of the scientific literature which relates to those arts, and to enable him to put a proper estimate upon those kinds of evidence which are obtained by experiments and by the observation of natural objects. The course is of one year, its professional character is indicated by the titles of the teachers.

The Storrs Agriculture School at Mansfield, Conn., derives its name from the donors of the original property, the brothers Augustus and Charles Storrs, of Brooklyn, N. Y. It has been established for the education of boys whose parents are citizens of Connecticut, in such branches of scientific knowledge as shall tend to increase their proficiency in the business of agriculture. Thus the object of the school is to teach practical and scientific agriculture and horticulture, "yet as subservient and necessary to this purpose various other branches are taught, especial prominence being given to those most necessary for the successful prosecution of agriculture."

In the class room the students study those branches of natural science, and only those, which have a directly useful bearing upon New England farming; and the indoor work is made to harmonize with that upon the farm and garden. These branches are general and agricultural chemistry, natural philosophy, farm mechanics, elementary geometry, land surveying, botany, zoölogy (which includes especially domestic animals and insects injurious to the crops of the farm and garden), geology, human and animal physiology, agriculture, farm accounts, stock breeding, milk production, arithmetic and English, taking up the general principles of scientific subjects and afterwards their special application to practical agriculture.

During the fall and winter term, when the necessities of the farm (of 170 acres) demand it and the weather permits, the students are required to spend three hours daily upon the farm, and six or more upon study, laboratory work, and recitations, a part going upon the farm in the forenoon and the others in the afternoon; and during the spring term, five hours a day may be required upon the farm, when there is special need of that amount of work, and five or more in school work. Extra labor, as far as practicable, is furnished to all who desire it as an aid towards self-support, when it can be performed without interference with regular duties. The aid received from the State permits the school to reduce its tuition fee to a minimum.

In brief the general plan of the course is to begin with a brief history of agriculture, ancient and modern; secondly, to enter into a study of soils, manures, and fertilizers, and the relation of these to plant-life and plant growth; and, lastly, a study of the higher forms of life, as represented in our domestic animals. Stock breeding, breeds of live stock, and cattle feeding occupy a large part of the time of the senior year. The agricultural experiment station is operated in connection with the school.

As an appendix to the remarks on the schools of agriculture in the United States, an account of the system of agricultural instruction in Prussia and in France has been translated and inserted after the curricula which follow.

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CURRICULUM OF THE INSTITUT AGROMIQUE (ÉCOLE SUPÉRIEURE DE L'AGRICULTURE), PARIS.

REQUISITES FOR ADMISSION.

The possession of the degree of bachelor of science, or in lieu thereof:
Written examination.—Arithmetic, algebra, geometry, logarithms, trigonometry, French composition, natural history sciences, physics, chemistry, descriptive geometry, English, German.
Oral examination.—Arithmetic, geometry, descriptive geometry, algebra, trigonometry, mechanics and cosmography, physics, chemistry, geography, English, German.

COURSE.

FIRST YEAR.

First semester.—Mechanics, general physiology, general chemistry, zoölogy, physics and meteorology, mineralogy and geology, botany, mathematics.
Second semester.—General chemistry, mineralogy and geology, mechanics, zoötechnics, physics and meteorology, general agriculture, agriculture (genie rural), zoölogy, political economy, botany.

SECOND YEAR.

First semester.—Agricultural technology, rural economy, agricultural chemistry, agriculture, engineering (genie rural), zoötechnics, special agricultural, arboriculture, comparative agriculture.
Second semester.—Viticulture and agriculture in the south [of France], comparative agriculture, administration of law and rural legislation, vegetable physiology, forestry, viticulture, hippology, agriculture, hygiene, and book-keeping.
The course is completed by conferences and practical exercises and demonstrations in chemistry, micrography, agriculture, physiology, zoölogy, zoötechnics, mineralogy, agricultural, arboriculture, and viticulture. Several times during the week there are exercises in tinting and topography, rural architecture and agricultural machines. Every Tuesday there is an excursion, industrial, botanical, or geologic, and in addition visits are made to farms, cattle markets, etc. A library which is supplied with all the important works on agriculture published in France and in foreign parts is open to the students.
There is a laboratory of vegetable pathology, a station for testing grains (essai de graines), a special laboratory for the study of fermentations in relation to brewing, distillation, wine-making, milk, and finally a laboratory of agricultural entomology.

CURRICULUM OF A TYPICAL AMERICAN SCHOOL.

REQUISITES FOR ADMISSION.

English composition and grammar, history of United States, geography, six books of Cæsar, arithmetic, algebra, geometry, trigonometry.

COURSE.

FRESHMAN YEAR.

First term.—German reader, history, English language, derivatives of algebraic functions, fundamental properties of equations, plane analytical geometry, physics with experimental lectures, chemistry, including laboratory practice, practical lessons in the art school.
Second term.—Plane analytical geometry, physical geography, botany, principles of orthographic projection, isometric drawing, etc.

SECOND YEAR.

First term.—Organic chemistry, qualitative analysis, mineralogy and botany, German, French.
Second term.—Organic chemistry, quantitative analysis, mineralogy, German, French.

THIRD YEAR.

First term.—Agriculture, agricultural chemistry, geology, zoölogy, meteorology, botany, French.
Second term.—Agriculture, agricultural chemistry, physiology, geology, zoölogy, heredity and stock-breeding, sanitary science and public health, French.

CURRICULUM OF THE LANDWIRTHSCHAFTLICHE HOCHSCHULE, BERLIN, FOR THE WINTER SEMESTER 1890-91.

REQUISITES FOR ADMISSION.

Reifezeugniss of a Gymnasium or Realgymnasium. (See p. 948.)

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LECTURES.

1. Agronomy, forestry, and gardening.

(*a*) Prof. Dr. Orth: General agronomy (tilling, irrigating, manuring) Monday until Friday, 10–11. Exercises in agronomical seminary: Field and plant cultivation division, Monday 6–8. Chemistry of the soil and plants, work, Monday to Friday, 9–4.
(*b*) Prof. Dr. Werner: Agricultural operations, Monday and Tuesday, 4–6. Breeding animals, Thursday, 4–6; Friday, 4–5. Bookkeeping, Friday, 3–4. Sketch of the science of agricultural production, Wednesday, 4–6.
(*c*) Prof. Dr. Lehmann: General breeding of animals, Tuesday, Wednesday, and Thursday, 9–10. Sheep-raising and wool-growing, Monday and Friday, 9–10; Saturday, 10–12. Fodder-raising, Monday and Wednesday, 12–1.
(*d*) Privy counsellor, Engineer Schotte: Agricultural machines, Saturday, 8–5. Principles of mechanics and of machinery, Friday, 1–3. Drawing, Tuesday and Thursday, 1–3.
(*e*) Forestmaster Krieger: Timber-growing, Monday, 5–7. Management and use of forests, Friday, 5–7.
(*f*) Garden Inspector Lindemuth: Fruit-growing, Monday and Thursday, 2–3.

2. Natural science.

I. Chemistry and technology:
(*a*) Privy counsellor, Prof. Dr. Landolt: Inorganic experimental chemistry, Monday until Friday, 11–12. Practikum in large chemical operations on the first five days of the week, 9–5; Saturday, from 9–1. Practicum in small chemical operations on the first five days of the week, as the student may select, 9–1 or from 1–5.
(*b*) Prof. Dr. Delbrück: The production of spirits, yeast, and starch, Wednesday, 12–2; Saturday, 8–10.
(*c*) Privat docent, Dr. Kayduck: Chemistry of fermentation, Friday 4–5.
(*d*) Privat docent, Dr. Marckwald: Chemical investigations in relation to agricultural processes, Saturday, 9–10.
II. Physics and meteorology:
(*a*) Prof. Dr. Börnstein: Experimental physics. 1 Part, Tuesday and Wednesday, 3–4.
(*b*) Selected chapters on mathematical physics, Wednesday, 11–12. Exercises in physics, Saturday, 11–1. Meteorology, Monday, 3–4.
III. Mineralogy, geology, geognosy: Prof. Dr. Gruner: Geognosy and geology, Tuesday, 12–1; Saturday, 9–10. Qualities of soil and their valuation, Monday, Wednesday, and Thursday, 12–1. Exercise in examining soils, Tuesday and Saturday, 4–6.
IV. Botany and vegetable physiology:
(*a*) Prof. Dr. Kny: Anatomy and history of the development of plants, Monday, Friday, and Saturday, 9–10. Use of the microscope, Monday and Thursday, 12–2. Work for tree cutters (woodsmen) in the botanical institute, daily, 9–4.
(*b*) Prof. Dr. Frank: Plant food, Tuesday, 12–1. Diseases of plants, Friday and Saturday, 12–1. Vegetable pathology (Practicum), Wednesday, 12–3. Work for forest cutters in Vegetable Physiological Institute, daily, 9–4.
(*c*) Prof. Dr. Wittmack: Seeds, Thursday, 12–1. Falsification of food and fodders, Friday, 1–3. Appropriate work in the botanical division of the museum, Saturday, 1–3.
V. Zoölogy and animal physiology:
(*a*) Prof. Dr. Nehring: Zoölogy and comparative anatomy with special reference to the vertebrata, Monday, Thursday, 11–12. The game of Germany, Friday, 11–12. Zoölogical colloquium, Friday, 5–7.
(*b*) Dr. Karsch:
Insects useful or injurious to agriculture, with special reference to bee-keeping and silk-worm raising, Wednesday and Friday, 8–9.
(*c*) Prof. Dr. Zuntz:
Physiology of the change of food into flesh, Monday, Tuesday, Thursday, and Friday, 10–11.
Hygiene of the domestic animal, Monday, 3–5.
Work in physiological laboratory, Friday and Saturday, 2–4.

3. Veterinary science.

(*a*) Prof. Dr. Dieckerhoff: Epidemic disease and parasites of the domestic animals, Monday, and Thursday, 2–3.
(*b*) Privy counsellor, Dr. Müller:
Anatomy of the stomach of the domestic animals with demonstrations, Tuesday, Wednesday, and Saturday, 2–3.
(*c*) Chief veterinarian for horse diseases (oberrossartz) Küttner: Horseshoeing, Tuesday, 8–9.
(*d*) Privat docent, Dr. Hagemann: Brief review of the physiology of feeding, Thursday, 4–5. Practical course of physiological chemistry, Saturday, 4–6.

4. Law and administration.

(*a*) Prof. Sering: Agrarian laws of Germany. Economical exercises in seminary of administrative law, with visits. Imperial and Prussian law with special reference to the farmer, surveying, and the technicalities of culture, Wednesday, 4–6.

5. Agricultural engineering and building.

(*a*) Amelioration inspector, Gerhardt: Agricultural engineering (Kulturtechnik), Saturday, 10–12. Plans of improvements, Friday, 11–1; Saturday, 12–2. Engineering seminary, Friday, 9–11.
(*b*) Prof. Schlichting: Management of water, Monday, 9–10. Construction of bridges and roads, Monday, 4–6. Plans of water management, Monday and Tuesday, 10–12.

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6. Geodesy and mathematics.

(*a*) Prof. Dr. Vogler: Settlement of accounts, Monday and Saturday, 9–10; surveying, Tuesday and Thursday, 9–10; practical geometry, Tuesday and Thursday, 11–12; exercises in measurements, in two groups, Monday, Tuesday, and Saturday, 10–12; Friday, 11–1; geodetic seminarium, Friday, 3–5; drawing, Friday, 9–11; exercises in surveying, Monday and Thursday, 3–5; geodetic calculation, in two groups, with assistant Prof. Friebe, Monday, 10–12; Friday, 11–1.
(*b*) Prof. Dr. Reichel: Analytical geometry and analysis, Tuesday and Thursday, 9–10; Wednesday, 9–11; mathematical exercises, in two groups, Monday and Thursday, 4–6; Friday, 3–5; descriptive geometry, Tuesday and Thursday, 10–11; exercises upon descriptive geometry, Tuesday, 12–1, and (with assistant Seiffert) Tuesday, 12–1.

CURRICULUM OF A SOUTHERN AGRICULTURAL COLLEGE.

PREPARATORY DEPARTMENT.

English grammar and composition, penmanship, declamation, arithmetic, elements of bookkeeping, algebra to equations of the first degree, geography, United States history, and agriculture.

COLLEGIATE DEPARTMENT.

FRESHMAN.

First term.—Drawing, algebra, English, natural philosophy.
Second term.—Algebra, English, agriculture, horticulture.
Third term.—Etymology, algebra, bookkeeping, English, history.
Declamations and compositions through the entire session.

SOPHOMORE.

First term.—Chemistry, drawing, geometry, rhetoric.
Second term.—Rhetoric, geometry, chemistry, geology, preparation of addresses on scientific and industrial subjects.
Third term.—Trigonometry, agriculture, botany, chemistry, delivery of addresses contesting for places at commencement.

JUNIOR.

First term.—Surveying, anatomy and physiology, horticulture, Constitution of United States (6 weeks), criticism (6 weeks), preparation and delivery of addresses on scientific and industrial subjects.
Second term.—Mechanics, chemistry, veterinary science, political economy, preparation and delivery of addresses on scientific and industrial subjects.
Third term.—General history, military science and tactics, entomology, mechanics, preparation and delivery of addresses, contesting for places at commencement, afternoon work in chemical laboratory, and with steam engine, 10 hours per week, November 15 to February 15.

SENIOR.

First term.—Literature, zoölogy, drawing, chemistry, preparation and delivery of addresses on scientific and industrial subjects.
Second term.—Botany, civil engineering, literature, chemistry, preparation and delivery of addresses on scientific and industrial subjects.
Third term.—Agriculture, chemistry, astronomy, moral science (6 weeks), meteorology (6 weeks), preparation and delivery of addresses, contesting for places at commencement.

POST-GRADUATE.

Biology.—Mycology, fertilization and cross fertilization, relation of insects and plants, histology, zoology, including embryology, with monthly written discussions, under direction of professor of biology.
Agriculture.—Principles of stock-breeding and feeding, theory of drainage, cultivation, curing and marketing crops, improvement of soil and manure supply. The student will be required to take charge of field and feeding experiments, dairy and general farm work under direction of the professor of agriculture.
Horticulture.—Pomology, floriculture, landscape gardening, forestry, geographic botany, economic botany, management of greenhouses, under the direction of professor of horticulture.
Chemistry.—Chemistry applied in the analysis of soils, plants, foods, animal tissues and products, feeding, water and other drinks, under the direction of the professor of chemistry.
English.—A course of reading in English prose and poetry, embracing entire works, logic, and mental science, with monthly written essays, under the direction of the professor of English.
Mathematics.—Analytical geometry, differential and integral calculus, applied mechanics, and civil engineering.

CURRICULUM OF AN EASTERN AGRICULTURAL COLLEGE.

REQUISITES FOR ADMISSION.

English grammar, geography, arithmetic, algebra to quadratics, the metric system, history of United States.

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COURSE.

FRESHMAN YEAR.

Fall term.—Climatology or relations of weather and farming (2 hours), structural botany (5 hours), chemistry, principles and metaloids (5 hours), algebra (5 hours), Latin (3 hours), composition (1 hour), military exercises (3 hours in afternoon).
Winter term.—Farm accounts, history of agriculture (2 hours), metals (4 hours), algebra and geometry (5 hours), Latin (4 hours), free-hand drawing (6 hours), tactics (1 hour half term), military exercise (3 hours).
Spring term.—Breeds of live stock and hand tools (5 hours), analytic botany (5 hours), mineralogy (4 hours), geometry (3 hours), Latin (5 hours), composition (1 hour), military exercises (3 hours).

SOPHMORE YEAR.

Fall term.—Soils, tillage, and drainage (5 hours), economic botany (5 hours), geology (4 hours), trigonometry (4 hours), French (5 hours), composition (1 hour), tactics (half term 1 hour), military exercises (3 hours).
Winter term.—Mixed farming, rotation of crops (2 hours), laboratory work (4 hours), anatomy and physiology (5 hours), mensuration (3 hours), French (5 hours), mechanical drawing (5 hours), military exercises (3 hours).
Spring term.—Manures, grains, and forage crops (5 hours), horticulture (8 hours), surveying (7 hours), French (5 hours), composition (1 hour), military exercises (3 hours).

JUNIOR YEAR.

Fall term.—Farm implements, harvesting and storing crops (2 hours), market gardening (6 hours), zoölogy and laboratory work (8 hours), mechanics, draft, friction, etc. (3 hours), rhetoric and composition (5 hours), military exercises (3 hours).
Winter term.—Preparation and transportation of crops, markets (2 hours), laboratory work (10 hours), zoölogy (3 hours), physics, sound, and heat (4 hours), English literature (5 hours), composition (1 hour), military exercises (3 hours).
Spring term.—Special crops, farm roads (1 hour), forestry and landscape gardening (— hours), laboratory work (5 hours), entomology (7 hours), physics, light, and electricity (3 hours), English literature (4 hours), composition (1 hour), military exercises (3 hours).

SENIOR YEAR.

Fall term.—Breeding and care of live stock (4 hours), lectures on law, etc., laboratory work, chemistry of fertilizers (8 hours), comparative anatomy of domestic animals (3 hours), veterinary science (5 hours), mental science (4 hours), composition and debate (1 hour), military science (1 hour).
Winter term.—Dairy farming (3 hours), lectures on law, etc., organic chemistry (3 hours), veterinary science (5 hours), meteorology (2 hours), political economy (5 hours), composition and debate (1 hour), military science (1 hour), military exercises (3 hours).
Spring term.—Agricultural review (3 hours), lectures on law, etc., chemical industries (3 hours), geology (3 hours), veterinary science (5 hours), constitutional history (5 hours), composition (1 hour), military science (1 hour), military exercises (3 hours).

CURRICULUM OF A WESTERN AGRICULTURAL COLLEGE.

REQUISITES FOR ADMISSION.

Arithmetic, geography, grammar, reading, spelling, penmanship, and history of the United States, a knowledge of elementary algebra to equations of second degree.

COURSE.

FRESHMAN YEAR.

Autumn term.—Algebra, ancient history, English grammar, elocution,
Spring term.—Geometry, free-hand drawing, lectures, lectures on agriculture, declamations.
Summer term.—Geometry completed. Botany, rhetoric. essays.

SOPHOMORE YEAR.

Autumn term.—Algebra completed, trigonometry (half term), military tactics (half term), botany (half term), agriculture (half term), lectures, declamations and essays (based on readings from Longfellow).
Spring term.—Trigonometry completed (half term), surveying and field work (half term), botany (laboratory work, 2 hours daily), rhetoric. essays, reading of American orations.
Summer term.—Mechanics, elementary chemistry (lectures), chemical manipulation (2 hours per week, optional). English literature (half term), lectures on landscape gardening (half term), botany (one day in the week), original speeches.

JUNIOR YEAR.

Autumn term.—Mechanics completed (half term), lectures on and laboratory practice anatomy (half term), lectures and laboratory on horticulture, lectures on organic chemistry, blowpipe and volumetric analysis, essays and public speeches, Shakespeare once a week.

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Spring term.—Human and comparative physiology (laboratory work 3 hours daily for 2 weeks), analytical chemistry (laboratory work 2 hours daily), logic, essays and public speeches, Shakespeare once a week.
Summer term.—Entomology (laboratory practice 3 hours a week), agriculture, agricultural chemistry, essays, Shakespeare once a week.

SENIOR YEAR.

[All studies elective in this year, except moral philosophy.]
Autumn term.—Psychology, chemical physics, lectures and laboratory work, lectures on agricultural engineering, lectures and practical dissections in veterinary work, critical essays.
Spring term.—Moral philosophy (half term), lectures on meteorology, lectures on civil engineering, lectures on Constitution of United States (half term), political economy (half term), lectures and clinical instruction in veterinary science, lectures on geology (half term), lectures and laboratory practice in horticulture (half term), military science, essays and public speeches.
Summer term.—Quantitative analysis, lectures and laboratory practice in botany or forestry, lectures and clinical instructions in veterinary science, English literature, philosophy of history (half term), astronomy, Milton (once a week), public speeches.

THE SYSTEM OF AGRICULTURAL SCHOOLS OF THE KINGDOM OF PRUSSIA.

DIVISION A: UNIVERSITY GRADE.

At the head of the system come the so-called institutes, which form a part of the universities. As the chemical and other laboratory instruction are adjuncts to the lecture system of the university so these agricultural institutes are places for demonstration, exercises, and investigation, and of course with special reference to the business of agriculture. The titles of these institutions are as follows:

1. The Agricultural Institute and Agricultural Chemical Laboratory in the University of Königsberg, with which is also connected the milk chemical laboratory, the agricultural physical laboratory, and the agricultural botanical garden and the veterinary clinic. Founded 1869–76. Length of study, 4 to 6 semesters. Conditions of admission, the Reifezeugniss of a gymnasium.[1] Four professors of agriculture and 7 university professors. Appropriation, $4,293 for the institute (excluding salaries) and laboratories, $1,083 for the veterinary clinic. At the close of 1890 there were 11 students. The agricultural chemistry laboratory has places for 20 students.

2. The Agricultural Institute in the University at Breslau, with which is joined a veterinary clinic. Founded in 1881. Length of course, 4 to 6 semesters. Eight professors proper, 14 university professors. Students, 27 farmers and 9 others. Appropriation for 1890–91, $7,794, excluding the salaries of professors.

3. The Agricultural Institute in the University at Halle. Founded 1862. Duration of course, 4 to 6 semesters. Professors of agriculture, 7; of science, 14; of law and political economy, 7; 8 assistants; students, 281, farmers by calling, of whom 71 were foreigners. The institute consists of the agricultural physiological laboratory, the agricultural collection, the botanical garden, the experimental field, the agricultural domestic animal farm (landwirthschaftliche Hausthiergarten), the dairy, the machine hall, the veterinary clinic. Cost, $20,560.

4. The Agricultural Institute in the University at Kiel. Founded in 1873. Duration of study, 4 to 6 semesters. Professors of agriculture, 2; of veterinary science, 1; of science, 10; of national economy and agrarian politics 2. One student, farmer by calling. Cost during 1890–91, $1,185, excluding salary of director.

5. The Agricultural Institute in the University at Göttingen, with which is connected the "animal chemistry experiment station," the agricultural chemistry laboratory, and the veterinary clinic. Founded in 1770 as a chair in the University, from which was developed a course of study in 1851, an academy in 1857, and finally the institute in 1872. Duration of study, 4 to 6 semesters. Professors of agriculture and fruit raising, 4; of building, 1; of veterinary science, 1; of science, 10; of national economy, 2; of agricultural law, 1. Students, 22. Cost, excluding the salaries of the director and the regular assistants, $2,198.

INDEPENDENT SCHOOLS OF AGRICULTURE OF UNIVERSITY GRADE.

1. The Royal Agricultural High School at Berlin. Founded in 1859–1881. (Program given on page 998.) Duration of study at least 4 semesters; for teachers in agricultural schools at least 6 semesters. There is, however, a two-semesters course, for land surveyors, and for "proved" surveyors another two-semesters course, called the Kulturtechniker (agricultural engineer) course.

[1] This will be understood though not mentioned in the case of each university that follows

There is also a course for practical farmers. Requisites for admission, about that of an American classical high school with four years course. Those who desire to become teachers of agriculture must have the Reifezeugniss of a gymnasium or of a Realgymnasium, and have had two years of practical experience in agriculture. For surveyors the requirements are a little lower than for the prospective teachers. Thirteen professors, 13 assistant teachers, 2 privat docents, 15 assistants (surveyors, veterinary surgeons, and doctors of philosophy in the laboratories). Students 406, of whom 178 were agricultural engineers and surveyors. In addition the following students took part in the exercises: From the University of Berlin, 53; from the Veterinary College and Military Horse School, 113. Cost, 1890–91, $95,788, of which the State paid $81,228, the rest being income from all sources.

The school has a chemical laboratory, a botanical institute, a vegetable physiological institute, a zoölogical institute, a zoötechnical institute, an animal physiological institute, a mineralogical institute, an agronomico-pedological institute, a physical cabinet and meteorological station, a geodetico-agricultural engineering professional division, a museum with a permanent exhibition of machines, etc. The course for practical farmers lasts for a week and is given during February. Attendance in 1890, 37.

2. The Royal Agricultural Academy at Poppelsdorf, near Bonn. (In connection with the University at Bonn). Founded in 1847–1877. The course for farmers and agricultural engineers covers four semesters, and for surveyors two semesters. Professors 9, assistant teachers 11; cost for 1890–'91, $31,331, of which the state paid $25,426, the balance being income from various sources. There were 133 students, of whom 92 were taking the surveyor's course of two semesters, and 5 the agricultural engineer course of four semesters. The requirements for admission are that the candidate have the mental training possessed by a student of the third below the highest class in a Prussian gymnasium, or of the final class of a scientific school (Realschule).

SUMMARY OF THE FOREGOING.

Institutions	7
Requirements for admission, about the completion of a collegiate course of study, and under very thorough methods.	
Duration of course from 2 to 3 years.	
Teaching corps:	
Professors teaching agronomical studies	a 51
Assistant teachers teaching agronomical studies	26
Scientific attachés	23
Students	927
Appropriation (or cost)	$164,231

HIGHER FORESTRY ACADEMIES.

The object of these institutions is to ground the student in the art of caring for and propagating forests and in related arts, but especially for service in the state forest service and the advancement of forestry in general. They are of university grade.

1. Royal Forest Academy at Eberswalde. Founded 1830; from 1821 to 1830 was connected with the University of Berlin. Length of study, four semesters at the academy and two at the university. Professors, 13, 1 assistant to the director, and 2 docents; students, 128 winter semester; appropriation 1890–91, $22,803. Several "forest gardens" and the institution for artificial fish raising are visited by the students, and with the school is connected the principal station of experimental forestry, which is composed of the following divisions: Technical forestry, meteorology, vegetable physiology, zoölogy, agricultural, chemistry.

2. Royal Forest Academy at Münden. Founded in 1868. Duration of study same as above. Professors, 10; docent, 1; assistants, 2; students, 31; appropriation, $15,865. With this academy are connected several gardens and "forest chemical experimental laboratories" and a fish-hatching establishment.

SUMMARY OF THE FOREGOING.

Number of schools	2
Requirements for admission, collegiate education, not over 25 years of age, good character, at least one year of practical work.	
Duration of course two years at the academy and one at a university.	
Teaching corps:	
Professors	23
Docents	3
Assistants of scientific attainments	3
Students	159
Appropriation	$38,068

a Does not include natural science nor national economy professors.

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VETERINARY UNIVERSITIES (THIERÄRZTLICHE HOCHSCHULEN).

1. Royal Veterinary University at Berlin. Founded in 1790, but raised to university grade in 1887. Duration of study, 7 semesters. Requisite for admission, Reifezeugniss of a gymnasium or of a Realgymnasium. Professors, 12; assistants, 3; students, 453; appropriation, $56,312, of which the state furnished $25,000. The school has an anatomical, a pathological, a physiological, and a histological institute. There is a clinic for internal diseases, etc., another for external disorders, for small animals, a pharmacological institute, an "ambulatory clinic," and a chemical institute.

During the year 1890 2,315 horses, 2 horned cattle, 1 hog, 1,127 dogs, 16 cats, 1 deer, 1 goat, 1 sheep, 1 squirrel, and 38 birds were in the hospital.

In the polyclinic were treated 5,900 horses, 1 horned beast, 5 goats, 22 hogs, 7,465 dogs, 265 birds, 96 cats, 5 rabbits, 7 squirrels, 2 porpoises, 2 hedgehogs, 5 apes.

In their stalls were treated about 600 animals and several herds. Over 100 cadavers of animals were used in dissection.

2. The Royal Veterinary University in Hanover. Founded 1778; raised to present grade in 1887. Duration of study and requisites for admission as above. Professors, 6; teacher, 1; assistant teachers, 6; students, 221; appropriation, $23,660, of which the state supplied nearly $12,000; 4,800 animals of various kinds were treated during the year; 266 visits were made by students with a teacher and 485 without.

SUMMARY OF THE FOREGOING.

Number of schools	2
Requisites for admission Reifezeugniss of a gymnasium or realgymnasium.	
Duration of course, 3 years and a half.	
Teaching corps:	
Professors	18
Assistant teachers	10
Students	674
Appropriation	$79,972

DIVISION B—AGRICULTURAL COLLEGES.

As a rule the agricultural schools (Landwirthschaft-Schulen) are not state institutions, although regulated by it, but are institutions subventioned by the state, a city, or a society. They have the object of preparing their students for farmers by teaching them as far as possible the science and art of agriculture, and by giving them a general education. The completion of the Tertia of a gymnasium absolves the student from two years of the compulsory military service, and the completion of the course of these agricultural schools is accepted as equivalent to the completion of the Tertia of the gymnasium course. In Germany the standard of reference for mental training is ever the gymnasium course.

In Prussia there are 16 of these colleges. They were established as furnishing a grade of instruction higher than the Ackerbau schools (see Division C), and were regulated by a Royal decree of 1875, which furnished them with a code, and, of course, a programme. As might be expected, they have all been established between 1875 and 1880. Some were formerly Ackerbauschulen, but the majority are new institutions.

The cities, provinces, or districts, and the agricultural societies have been about equally interested in starting though not in supporting these schools, but the Government exercises an oversight through the minister of agriculture, domains, and forests. In order to obtain absolution from two of the three years of army service the schools must strictly follow the curriculum provided, must have the necessary apparatus for teaching, and at least four professors, including the director, who must have passed through the course of an agricultural school of university grade. The subjects of the course provided by the Government are as follows:

1. Religion.
2. Language.

(*a*) German. Correct use of the mother tongue and acquaintance with the classics of the language.

(*b*) Latin (optional). Ability to read a selection from an easy prose writer, a piece of easy poetry, with assistance in the case of unusual words, but otherwise with ease and purity.

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(c) English or French. Correct pronunciation and knowledge of the more important rules of grammar. Facility in reading medium difficult prose (Voltaire's Charles XII or Irving s Sketch Book) and ability to translate an easy theme in the mother tongue into English or French without any serious errors of orthography, grammar, or idiom.

3. Geography: Principal points of mathematical geography [astronomy]. Knowledge of the different parts of the world, seas, mountains, rivers, etc. For Europe, and especially Germany, special knowledge of the natural and political features and ways of communication. History: Acquaintance with the principal facts relating to the Greeks and Romans. More special knowledge of the growth of the German Empire and the development of the states of which it is composed, especially Prussia, the intellectual advancement being regarded as well as the political.

4. Commercial arithmetic and the application of the same to agricultural affairs. Computation of surfaces and solids. The four fundamental algebraic operations, powers, roots, and logarithms, equations of the first degree of one and two unknown quantities, planimetry, knowledge of the simple trigonometrical functions and their application to goniometry, surveying with simple instruments, leveling, and mapping.

5. Natural science.

(a) Zoölogy: Knowledge of the different classes of animals with the principles of anatomy and physiology, with especial reference to animals important to agriculture.

(b) Botany: Knowledge of the vegetable families and the elements of vegetable anatomy, physiology, and pathology.

(c) Mineralogy and soils (Bodenkunde). Knowledge of the important minerals, their qualities, and usefulness of the different kinds of soils, the formation and agricultural value.

(d) Physics. Experimental familiarity with the great laws of physics (qualities of bodies, heat, etc.), and with meteorology.

(e) Chemistry. Knowledge of the most important elements and their compounds, as well as of the processes in their manipulation, with especial reference to physiology and technical agricultural affairs.

6. Agriculture.

(a) Production of vegetation. Knowledge of principles that govern the tilling and the amelioration of the soil and the growing of crops; acquaintance with the culture of the important plants.

(b) Breeding of animals. Knowledge of the principles of rearing, feeding, and care of domestic animals.

(c) Management. Knowledge of the factors of good management and their connection with the management of a farm; bookkeeping.

7. Drawing.

8. Gymnastics and singing.

Time table of the Prussian agricultural colleges.

Subject.	First year.	Second year.	Third year.
1. Religion, obligatory for unconfirmed students	1	1	1
2. Language, German and two foreign languages, Latin, English, or French	9	9	9
3. Geography and history	4	4	4
4. Mathematics	5	4	4
5. Natural history:			
(a) Zoölogy and botany	4	4	2
(b) Physics	2	2	2
(c) Chemistry (and meteorology)	2	4	4
6. Agriculture:			
(a) Production of vegetation	4	4	2
(b) Breeding animals			
(c) Management			2
7. Drawing	2	2	2
8. Gymnastics and singing	3	3	3
Total	36	37	37

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The statistical facts connected with the school of Division B are these:

Number of schools	16
Number of—	
Full teachers	107
Assistant teachers	56
Students in college proper	a 1,090
Appropriation from—	
State (usually $3,750 and sometimes $4,500 to each)	$63,900
Provinces (in the case of 10 schools)	8,100
Districts (in case of 11 schools)	3,076
Cities (in case of 8 schools)	7,159
Societies (in case of 3 schools)	1,013
Total	83,248

A garden is always attached to these schools, and frequently more extensive grounds, such as experimental fields, fruit gardens, and the like. There is almost always a preparatory school, which should be taken into account in considering the number of teachers, but the 1,090 students given above are professional students and are not in the preparatory course.

DIVISION C.—ELEMENTARY AGRICULTURAL SCHOOLS.

The elementary agricultural schools, or Ackerbauschulen, are lower agricultural schools in which the pupil of the country school may continue his studies while learning something of the theory and practice of agriculture. There are 28 of these schools in Prussia, and although 7 of them were opened 1840 to 1860, the great majority have come into existence during the last twenty years, during which there seems to have been a desire on the part of the Government to promote agricultural education.

There is no common programme for these schools, and it is thus very difficult to discuss their curriculum. Perhaps they may with sufficient accuracy be divided into three classes: Those having one or more teachers of the grammar-school studies, and a teacher of agriculture, those having a teacher of the grammar-school studies and teachers of agriculture, surveying, and the elements of veterinary art, and those (the largest class) having several teachers of a course which resembles the scientific course of an American high school and also instructors in agriculture and related arts. How far this instruction is carried it is impossible to say. As the completion of the course does not absolve the student from two-thirds of his army service, the state has no indirect way of stimulating a high or even a uniform curriculum, which thus being left to the locality is, it may be presumed, in some places high, in others low. The schools are excellently well supplied with experimental fields, etc. Smithing and other trades are taught. The course is, as a rule, 1½ or 2 years in length; occasionally it is only 1 year, and in two instances it is 3 years. The summary of the statistics of this class is as follows:

Number of schools	28
Teachers	66
Pupils	1,073
Pupils from farm in every 100	87
Appropriation by—	
Provinces (21 cases)	$29,403
Districts (6 cases)	2,013
Cities (1 case)	250
Societies (2 cases)	963

DIVISION D.—AGRICULTURAL WINTER SCHOOLS.

The object of these schools is to continue the general education of the common country school. They offer to the farmer's boy, at the time when his services are not required on the farm, or to the young farmer who is not in the situation to avail himself of the instruction of the Ackerbauschulen, a certain amount of practical instruction which such persons require to carry on advantageously their vocation. Of these schools there are 73. They are in the main supported

a Does not include preparatory school pupils, nor 66 Ackerbauschulen pupils, nor 17 winter school pupils, nor 23 pupils in a very mixed school which is joined with one of these agricultural colleges.

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by the provinces, which appropriate from $250 to $1,000 annually; but the sources of support are various, the state, the district, the city, and very frequently a society, make grants. In 69 of them there were, in 1890, 2,235 pupils.

DIVISION E.—MEADOW SCHOOLS.

These have the object to instruct the sons of peasants in the management of meadows and in draining. There are 3 schools with an attendance of 195 pupils. They seem to be specialized winter schools, and are supported by the province in which they are located.

DIVISION F.—POMOLOGICAL AND GARDENING INSTITUTES.

Of these there are 4. The course is of two or three years.

The conditions of admission are, on the intellectual side, the completion of the upper or lower class of the gymnasium grade, called Tertia, and, on the practical side, 2 years' experience in gardening. Pupils in attendance, 137;[1] appropriation for 3 schools, $36,037, mostly from the state.

The full course of the Royal Institution for Teaching the Cultivation of Fruit and Wine-making at Gersenheim is as follows:

(*a*) Fundamental subjects: Botany, chemistry, physics, zoölogy, mineralogy, and mathematics.
(*b*) Professional subjects: Cultivation of plants in general, fruit-culture, tree trimming and growing, pot culture, pomology, utilizing fruit, grape-culture and the enemies of the vine and fruit tree, vegetable-growing, landscape gardening, flower-growing, drawing plants, painting fruits, and surveying and levelling.
(*c*) Horticultural bookkeeping, bee-keeping, singing, and gymnastics.

It will suffice to show the condition of agricultural education in Prussia to give the titles and attendance at the other classes of schools. For convenience the classes previously spoken of are again given.

General statement of the attendance at the schools for agricultural and the related arts at the close of the year 1890.

	Number of schools.	Attendance.
A. (*a*) Agricultural schools of university grade	7	927
(*b*) Forestry academies	2	159
(*c*) Veterinary institutions	2	674
B. Agricultural colleges (Landwirthschafts Schulen)	16	1,815
C. Elementary agricultural schools	28	1,061
D. Agricultural winter schools	73	2,235
E. Meadow schools	3	195
F. Pomological and gardening institutes	4	137
G. Garden and fruit-growing schools and courses	52	1,744
H. (*a*) Sugar-making schools	1	41
(*b*) Distillery school	1	81
(*c*) Forestry school for subordinates	1	95
(*d*) Dairy schools	13	236
(*e*) Housekeeping schools	3	25
(*f*) Horseshoeing schools	42	512
(*g*) Bee-keeping schools	2	94
(*h*) Course for teachers in rural continuation schools	1	21
(*i*) Rural continuation schools	54	648
Total	305	10,700

COURSE IN AGRICULTURE IN THE HIGHER ELEMENTARY SCHOOLS OF FRANCE.

Occasionally it has happened in the history of the public-school systems of Europe that public economic distress or social disorder has been the cause of an addition to the curriculum of the public schools, and in order that the new subject may be properly and thoroughly presented in the elementary schools the

[1] Does not include 215 persons in short courses in one school.

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curriculum of the schools for training teachers has first been similarly enlarged. No sooner does the German Emperor complain, for instance, that he finds that the curriculum of the German public schools in the past has given him no aid in combatting the socialistic theories so prevalent in his Kingdom of Prussia, and straightway the subject of political economy is introduced into the Prussian schools for training teachers; and so has it been with the subject of agriculture in France. Though the French revolution decided that agriculture should be placed upon the programmes, it was not until 1851, however, that instruction in agriculture was introduced as a part of the programme of the last year of the course of the schools for training teachers.

In 1860 the majority of 6,000 teachers to whom the French minister of public instruction had applied for suggestions as to the ameliorations to be made in elementary instruction responded that agriculture should be added to the course of the public schools. Shortly afterwards the symptoms of an agricultural crisis began to appear, and an investigation was made into the matter for the purpose of remedying the evil. The commission were unanimous in calling attention to the powerful influence that elementary instruction would exert in favor of agriculture, the greatest national industry of France, if introduced as a subject of study in the public schools. The manner in which this instruction should be introduced was given under three heads: First, the instruction that should be given in the schools for training elementary-school teachers; second, the instruction that should be given to the children in the district schools; third, the instruction that should be given to the adults in special courses which were appropriate to the needs of agriculture. By the law of 1879 it was enacted that every department that had not yet established a departmental professor of agriculture should be obliged to provide for one within three years. At the close of 1888 instruction in agriculture was completely organized in almost all the schools for training elementary-school teachers. But in the elementary schools instruction in agriculture has been unsatisfactory. "It is to the teacher that a good book on agriculture is indispensable; in the hands of the child it is more hurtful than helpful," says the report of the professor of agriculture of the Department of the Gironde.

But above the district school, and frequently in connection with it, there are higher elementary schools, which are of two kinds—professional and nonprofessional. In the city of Paris the course of these schools is as follows

Theoretical branches.

The subjects of this programme are apportioned over the three years' course, so as to apply in the best way to the requirements of professional instruction.

MORALS.—The principles of morals, duties, and rights of the citizen; elementary principles of political economy.

FRENCH LANGUAGE.—Methodical study of grammar and orthography, etymology, and derivation of words, exercises in style and composition, elements of the history of literature.

WRITING.—Principles and practice of running-hand, round-hand, and commercial handwriting.

HISTORY.—Principal characters of antiquity, history of France up to the present day, development of national institutions, chief epochs of general history (ancient, middle ages, and modern).

GEOGRAPHY.—Physical and political geography of the world, special geography of France (comprising the divisions for administrative purposes), economic geography, map drawing.

MODERN LANGUAGES.—One modern language at least.

MATHEMATICS.—First year: Theoretical and practical arithmetic, first elements of ordinary geometry. Second year: Advanced arithmetic, elements of algebra, plane geometry and its applications. Third year: Principles of algebra as applied to the solution of simple equations, the elementary principles of rectilinear trigonometry as applied to the estimation of triangles, elementary principles of solid geometry and their application, the common curves.

ACCOUNTS.—First principles of commerce and account keeping, book-keeping, current accounts bearing interest.

PHYSICS.—The most important phenomena and the principal theories of physics, modern discoveries, and the application of science to daily life.

CHEMISTRY.—Exercises involving the observation and examination of some of the familiar facts introductory to the study of chemistry, the metalloids and the most useful metals, the laws of chemistry, the elements of organic chemistry.

NATURAL HISTORY.—Organs and functions of men and animals, practical study of the principal groups of animals and vegetables, application of hygiene to the local industries, principal facts of geology, and examination of the best-known minerals.

SINGING.—Choir, with three parts.

GYMNASTICS.—Exercises with apparatus and military drill.

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Professional Instruction.

The programme of professional instruction in the workshops is apportioned to the three years as follows, and is in practical operation in a number of schools:

First Year.

[Two hours per day.]

DRAWING AND MODELING.—Execution of the regular geometric solids of given dimensions from figured sketches.

WORKSHOP TEACHING.—(First period)—Working in wood: A box, a drawing board, a mortise-and-tenon joint, a slit-and-tongue joint, a joint halved together obliquely, a St. Andrew's cross, various kinds of scarfed joints.

(Second period)—Working in iron: Exercises with the file on an uneven piece of iron. Make rectangular parallelopiped, with a square base of given dimensions; this to be converted into an octagonal prism, then into one with sixteen sides; this is to be filed round; then, in the lathe, to turn this into a cylinder of specified diameter, and finally convert it into a hexagonal prism.

(Third period)—Working in wood: Various kinds of dovetail joints, splices, skew splices, halved together, scarf-halved with dovetail pieces.

(Fourth period)—Working in iron: Toolmaking, two rules in iron of given dimensions, two plain squares, a pair of calipers, exercises with the lathe and cutting chisel.

Second Year.

[Three hours per day.]

DRAWING AND MODELING.—Execution in graduated series of ornamental casts composed of elements of solid geometry arranged systematically, rosettes, etc.

WORK IN THE SHOPS.—(First period)—Working in wood: Mortise and tenon to moulded work, tenon for miter joint, mortise and tenon with champfered dovetail, tongued joint with cross-ties, mortise and tenon for quoins.

(Second period)—Working in iron: An angle out of square, a pair of pointed compasses, a hand vise.

(Third period)—Working in wood: Angle open-mortise joint, slit-and-tongue joint in two thicknesses of stuff, stepped in mortise and tenon, square joint of two cylinders, oblique joint of two cylinders, a pair of screw clamps.

(Fourth period)—Working in iron: Bit pincers, screw-wrench, exercise with the lathe, exercise with the cold chisel.

Second Year—Continued.

Third Year.

[Five hours daily the first six months, seven hours the last six.]

DRAWING AND MODELING.—Elements of architecture, orders and styles, ornaments of the different orders and styles.

Industrial drawing: Theoretical principles of composition and of the arrangement of colors.

General principles of the application of drawing to pottery, to fret-cutting in wood and metal, to artistic locksmith's work, and to the ornamental stamping of paper and fabrics.

CHEMISTRY.—Experiments in the laboratory, manipulation, analyses, mode of fixing colors (applied to pottery, stuffs, etc.).

ACCOUNTS.—Industrial account keeping, fixing of a scale of profits, applying the same to the work of tools and machines.

WORK IN THE SHOPS.—(First period)—Working in wood: The making of tools, moulding-block, miter block, wood bench-clamp, tenon saw, small hand saw, inlaying saw, a plane, use of the wood lathe.

(Second period)—Working in iron: The making of tools, a pair of steel squares, (one of them to be a rim square), a tap wrench, working with the cutting chisel.

(Third period)—Working in wood: The making of tools, a plane, jack plane, square, marking gauge, grooving plane, work with the lathe, model-making.

(Fourth period)—Working in iron: Making a shifting gauge, working at the forge, elementary work: making of tools, chisels, cross-cut chisels, boring bits, etc.; working at the lathe and with the cutting chisel.

In the schools of this class which have instruction in agriculture instead of in the mechanic arts, the course of agriculture covers two years, although the school has a course of three years, the first year of the course being entirely devoted to general culture. The applications of physics, chemistry, natural history, geometry, etc., however, should be pointed out to the students to prepare them for the professional instruction of the last two years of the course. During the week there are two lessons in agriculture, each of one and a half hours. The first year of the course proper is devoted to the study of vegetable life, general and special agriculture, horticulture, and arboriculture. The second year is devoted to the study of animal life, rural economy, and accounts. The syllabus which follows is modified at the discretion of the teacher. The lessons upon general agriculture and zootechnics should be made as general as possible, and only the plants and animals which are raised in the surrounding country should be treated in detail. No lesson on grape-culture should be given in a country where the grape is not cultivated, nor should a lesson upon tobacco-culture be given when none is grown in the neighborhood, and so on. The theoretical instruction is illustrated and fixed by demonstration, practical exercises in the school garden, and excursions. The teacher should avoid with care the use of technical words, which very frequently obscure his meaning and in any case load the memory of the pupil with terms which later on he will never use. The instruction should be as far as possible clear, precise, interesting, and practical.

Lately a course of agriculture for the country elementary schools of France has been printed; how far it is in operation is not known to this Bureau, but what it is is shown by the syllabus which follows:

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SYLLABUS OF THE AGRICULTURAL COURSE IN THE ECOLES PRIMAIRES SUPÉRIEURES FOR BOYS.

FIRST YEAR—AGRICULTURE.

I.—INTRODUCTION.

Definition and object of agriculture.—As one of the branches of human knowledge. The object of the science is to find the most advantageous way of producing vegetables and animals. Is one of the most important industries. Résumé of its results. Capital that it employs. Number of persons that it employs. Its primary conditions, tools, and forces. The rôle of water, heat, and light. The farmer should be familiar with the physical and natural sciences. Illustrations of this fact by examples taken from botany, geology, zoölogy, physics, etc. Agriculture as a science, as an art, as a trade. What meaning the words practice and routine should convey. The object of the course is not to teach the trade of agriculture, but to study the phenomena of the life of cultivated plants and domestic animals and to give information that will aid in its development and multiplication. The course should be filled with practical and healthy ideas, so that the pupil when he becomes a man will better understand his trade by reasoning upon what he is doing and strive to improve his methods, to wit:

Utility and advantage of instruction never more necessary than now to the farmer; competition; rapidity of the change in procedure; conditions under which plants and animals may be improved; advantages of this improvement; good and bad seedings; fertility of the soil; law of restitution; necessity of neglecting nothing; influence of good and poor food on domestic animals; difference between a well-made and a poorly constructed plow as an instrument of work.

Importance of the slightest progress in agriculture. Choice and improvement of the French varieties of seed so as to obtain a great yield, as for instance, if 50 more liters of grain can be raised to a hectare, it would be a gain of 100,000,000 francs a year, and if a centime can be saved daily in the feeding of domestic animals by improving the manner of preparing the food or ameliorating the animal machine in a manner to enable it to employ the food consumed to a better advantage to the farmer, it would be a gain of a 215,000,000 francs.

Instruction increases the charms of rural life. The attractions of the study of natural objects. Observation and interpretation of natural phenomena. Rôle of the enlightened farmer as the director of operations or as a broker. Mechanical work nourishes (asservit) both mind and body. Work done intelligently and willingly elevates man and increases his dignity. Work of cities and shops. Work of the country. Economy, health, strength, and vigor. Thanks to the healthfulness of her occupations agriculture is able to furnish the most numerous, spirited, and enduring part of the army. To cultivate and improve the soil is, then, doubly to serve one's country.

2. GENERAL AGRICULTURE.

Agrology (*i. e.*, study of the soil with relation to agriculture).

I.—*Soil and subsoil.*

Origin and formation of the arable bed. Meteorological, physical, and chemical action. Circumstances which influence the quality of the land, such as geographic situation, altitude. Inclination and exposure of the land. Rainfall.

II.—*Classification of lands according to their physical and chemical composition.*

Physical properties and chemical composition of the land. Wheat, rye, oats, vine, and fruit lands, natural and artificial meadows, pastures, woods, and forest land.

III.—*Study of the best way of modifying the composition of the soil and the physical properties.*

1. Definition and classification of measures. Animal, vegetable, and mineral manure. Composts.

2. Stable manure, solid and liquid. Relation between and food consumed. Influence of food upon. Importance of liquid portion. Use of litters and of

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what made. Preparation of litters of straw, rushes, ferns, leaves, dry grass, sawdust, marl (marne), dry earth. Care that should be given stable manure as to fermentation so as to prevent loss of valuable ingredients. Calculation of the production in relation to the consumption of forage and grain. Means at hand for increasing the supply of manure and improve its quality. Value of manure lost by negligence, in money. Fertilizing matter of cities and villages; its value and utilization. Manner of employing liquid manures. Poudrette. Wool-waste, hair, horn, skin, etc. Guano.

Vegetable manure.—Green manure; fiber (such as cotton-seed meal, for instance); sediments and waste from distilleries and sugar refineries, tanneries, etc.; sea plants, muck, paring and burning (as it is called in English agriculture).

Mineral manure.—Phosphates of chalk; salts of ammonia, of potash; ashes; nitrate of soda, salt, plaster, chalk, shells, etc. Practical experiments with these manures. Valuing the quantity of carbonate of lime in a marl. Theory of chemical manures and estimation of the relative value of manures. Precautions that the farmer should take to prevent his being imposed upon when buying commercial manures. Law touching the subject. Laboratories and stations of experimental research.

Irrigation.—Object is to supply water to enable the plants to grow, and also to carry in fertilizing matter. Kind of water required; its collection and distribution. Reservoirs, machines, canals, systems of irrigation, and preparation of the land. Increased value of the land. Lands adapted to the purpose. Quantity of water required. Time of distribution, precautions, cost, sediment. Means of using the local advantages for irrigation in the country in which the school is located.

Reclaiming land.—Difficulty of working wet soils and bad effects of water, especially in the early spring, when in the furrows. Means employed to remove the surface water. Open ditches. Influence of draining on clay lands as to temperature. Aereation of the soil. Absorption of atmospheric gases. Manure. Partial and complete drainage. Expense. Enhanced value of land. Loans by the state to enable the farmer to drain his land; law of May 28, 1858. Servitudes of draining; law of June 10, 1854. How valueless lands of the locality of the school which might be reclaimed.

Mechanical means of modifying the physical properties of the soil.—Conditions under which good tillage is possible. Proper time. The effects. Subsoiling. Clearing and breaking up land. Nonlifting subsoiling. Plowing. Various kinds of plows, and the qualities of an ideal instrument. The use of steam and animals as power. Cost. Harrowing, rolling, etc. Indications of the improvements which might be introduced in the vicinity of the school in these respects.

3.—Special Culture.

1. Study of the plant considered as an instrument (outil) by the aid of which the cultivator produces vegetable matter by using the nutriment contained in the atmosphere and in the soil.—Composition of plants. How they grow and feed. Influence of latitude and altitude. The farmer should accommodate his crops to these conditions. Qualities of the various kinds of plants cultivated. (Syllabus abridged.)

2. Study of the principal vegetables cultivated in the locality of the school or which may be introduced there with profit.—Cereals, legumens, forage and pastures, plants of industry (sugar beet, tobacco, etc.). Rotation of crops, viticulture, sylviculture. (Syllabus abridged.)

Horticulture (including the kitchen garden):

1. General ideas.—Situation of the garden. Proper soil. Preparation of the soil. Grafting. Improvements possible in the environment of the school.

2. Arboriculture.—Table grapes, peaches, apricots, cherries, plums, pears, and apples; the soil in which they should be grown, the manner in which the trees should be trimmed, etc. Conservation of fruit. Flower garden. Improvement possible in these respects in the vicinity of the school.

3. Kitchen garden.—1. General remarks. The usual kinds grown. Seed beds and resetting. 2. Cultivation of the usual vegetables. Cultivation of ornamental plants by slipping, etc. Possible improvements to be made in these respects in the locality of the school.

ZOÖTECHNICS.

Study of the use of animals in agriculture. The animal a machine which transforms the food it receives into power, flesh, milk, wool, etc. The course is divided into three parts—general, hygienic, and special zoötechnics.

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1. General zoötechnics.—Food, importance of knowledge of. Animal physiology. Comparison of the chemical structure of the organs of animals with that of the food they eat. Organic and mineral matters. Different methods of determining nutritive equivalents. Cured and green food leaves, branches, roots, straw, grain. Influence of the time of year (l'époque) upon the harvest, and of the method of culture upon its nutritive value. Good cultivation and good manuring, poor cultivation and careless cultivation. Vegetable husk and pulp and other industrial refuse as food. Salt, its physiologic action, and the manner of feeding it.

Watering. Necessity. Quantity necessary. Temperature. Precautions to be taken in winter, especially for cows. Qualities that the water should have. Ponds and drinking places.

Feeding. Regularity. Changing from green to cured food and the precautions that should be taken; preparing hay, cutting hay, grinding grain, warming roots and grain. Fermentation. Effect of these preparations upon the assimilation of the food. Importance of the matter. Study of the instruments and machines employed. Feeding during the different seasons, pasture, and stable. Amount to be fed daily and the influence which race and individual peculiarities should exercise upon it.

2. Products.—Milk, its composition, secretion, food proper to produce. Type of a milch cow, general and special characteristics, and Guénon's system. Sale of milk and utilization of that unsold. Butter and cheese making. Dairy-keeping. Reforms that should be introduced. Production of flesh, strength, and manure.

3. Reproduction.—Selection of stock for breeding, heredity, and atavism. Rearing. Castration.

4. Hygiene.—General principles. Currying and rubbing down. Construction of stables, etc. Care and treatment of disease.

5. Zoötechnie Spéciale.—Species and races and the improvement of the latter. Special study upon the horse and other domestic animals. General study of the animals useful to the farmer. Pisciculture in fresh, brackish, and salt waters. Culture of oysters and salt-water mussels (moules). Useful insects. Apiculture. Sericulture. Acclimatization.

RURAL ECONOMY.

Property in land and methods of cultivation. Leases. Salaries. Means of stopping the depopulation of the country. Agricultural loans (crédit agricole). Agricultural societies. Syndicates. Instruction in agriculture. The "Institut Agronomique" (Agricultural University of France). The "national schools of agriculture." The "practical schools of agriculture." The "farm schools." The "departmental professors of agriculture." Agricultural statistics of France. Production and consumption. Importation and exportation. Importing countries. Countries to which France exports food stuffs. Agricultural statistics of the department in which the school is situated and a general review of its situation from an economic standpoint.

BOOKKEEPING FOR FARMERS.

Necessity of keeping a record of the details and results of cultivation. The necessity of reducing the writing to the smallest amount possible; for the cultivator from the nature of his occupation is not fond of office work. By order and method it is possible to accomplishing this by noting in a pocket notebook the facts as they occur, and giving an hour or two on Sunday to their study. Above all the farmer should know the capital that has been sunk in his enterprise. His inventory should consist of the value of the property and buildings, the capital used in carrying on farming (animals, instruments, manure, etc.), and cash on hand. A farmer should study in advance his plan of action and regulate his expenditure thereby. In addition the farmer should keep a cash book.

PRACTICAL WORK.

Within doors.—Study of seeds—determination of the nature of the seeds of cultivated plants and of weeds. Dodder seeds—determination of the purity of the sowing and its germinating power. Study of soils, their composition and analysis. Rocks found in the locality. Soil formed by the disintegration of rocks, and alluvial soils. Soil and subsoil. Study of manures. Appearance of

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commercial fertilizers, their preparation and distribution. Analysis of specimens of commercial fertilizer. Study of agricultural instruments, the work they do, the care they should receive, and their repair. Study of plants, of milk, of the teething and age of animals, the foot of the horse, ox, and ass, and shoeing. Beehives, trellises, etc. Insectides, etc. Buildings and materials. Collecting insects.

Outside work.—Spading, raking, rolling, clipping, grafting, pruning, sowing, replanting, growing, cuttings, weeding, making composts, etc.; applying sulphur, etc., to destroy the fungus on vines and vegetables; gathering and preservation of the crops. Special plates for comparative study of the value of the different kinds of manures and cultivated plants. Visits to hothouses, gardens, etc.

BIOLOGY.

The study of biology has been given the attention its importance deserves in a special study issued by this Bureau as Circular of Information No. 9, 1891. By an inadvertency, however, a notice of the biological departments of the University of Illinois was omitted from the circular, and the occasion is here taken to insert an account of the biological work of that institution, which has been kindly furnished by Prof. S. A. Forbes, of the State laboratory of natural history of Illinois.

The erection, in 1892, at a cost of $60,000, of a new building for the biological departments of the University of Illinois affords a suitable occasion for a description of their organization and work—in some respects typical for the State universities, and in others unique. These departments are thrown together, by the plan of unive sity organization, forming what is known as the school of natural science, which comprises the departments of botany, zoölogy, entomology, human physiology, and geology.

The courses in this school are especially intended:

(1) To afford a thorough and liberal education with a basis in science and the modern languages.

(2) To prepare for the pursuit of specialties in zoölogy, entomology, botany, general biology, and geology, as a scientific career.

(3) To lay a liberal foundation in biological work and study for a course of medicine.

(4) To prepare for the teaching of the natural and physical sciences either in the higher schools or as a professional specialty.

The sciences required for admission to the studies of the school are botany, physiology, and physics, with algebra through radicals, and plane and solid geometry. The scheme of requirements for graduation is so constructed as to permit the student either to specialize at the beginning of his sophomore year by the selection of a major subject, to be pursued, if desired, for three years continuously, or to distribute his principal effort within certain limits over a small group of related subjects. To this end the studies of this school are divided into three groups: (1) required studies, (2) restricted electives, and (3) open electives. Under the head of restricted electives both major and minor courses are given, the former the maximum offering and the latter the minimum requirement in their respective subjects.

No student may graduate from the school of natural science until he has completed all required courses, and has done at least nine terms' work on one major subject, or twelve terms' work on more than one from the group of restricted electives; and taken at least minor courses in all the other subjects of this group in which such courses are offered. The major courses must be chosen for a year at a time, and may not be changed without special permission.

The required subjects are, on the other hand, general culture studies (mathematics, history, and philosophy) and, on the other, modern languages and drawing, required because necessary to any extensive pursuit of the biological sciences. The minor courses of the "restricted elective" group are all one term courses offered in botany, zoölogy, physiology, geology, physics, and chemistry respectively.

Major courses of three years are offered at present in botany and zoölogy only. In geology five terms' work may be had, in entomology two terms, and in general biology a single term, coming as a sequel to the courses in zoölogy and botany.

In botany six courses of instruction are offered—five primarily intended to meet the wants of students making botanical work more or less a specialty, and

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After the repeal of the act of 1853 creating forty-eight scholarships the educational authorities of Massachusetts urged the necessity of an additional and higher course of instruction in the four normal schools of that State. At the date of 1870 those schools had a "voluntary" course of two years, chiefly attended by former graduates, "who had learned from their experience in teaching the value of a more advanced scholarship."

It was not until 1879 that a definite step was taken in the way of recognizing pedagogy as a science and also of recognizing the necessity of training teachers for schools above the elementary grade. In that year the University of Michigan established a chair which took the expressive name of the "Science and art of teaching." In considering the instruction given from this chair, the inquirer is struck with three facts, to wit, the announcement that the science of education, being one of the latest of the sciences, had not yet been cast into articulate form, in fact was in process of formation; the scholastic character of the attendance on the course, two-thirds of whom were college graduates; and most important of all, the double requirements to be fulfilled before the "teacher's diploma" was given to the candidate, the requirements being (1) marked ability in either Greek, Latin, French, or physics as shown by special examinations, and (2) one of the courses offered by the professor of the science and art of teaching. The course of this chair was not long, only occupying, indeed, an academic year, and even this time was halved, one-half being devoted to the study of supervision, grading, courses of study, examinations, the art of instruction and governing (no practice or model school), school architecture, school law, in a word, superintendency, and therefore called practical; and the other half to the history and science of education and comparative pedagogy, if that term may be coined.

The difference between this course and those of either the French École Normale, or the Prussian training colleges for Gymnasialpädagogik is marked. To illustrate this it may be profitable to compare the work at the University of Michigan with that of two typical Prussian training colleges for candidates for teachers' positions in the classical schools called gymnasiums.

BERLIN (1885-86).—ESSAYS BY THE MEMBERS OF THE SEMINARY.

The great Homeric hymn on Mercury.

De Nemæorum Pindari carminum locis quibusdam controversis.

Platonica (critical essay on some points in the Symposium).

Remarks on the names of Greek priests.

Quæstiones Tullianæ ad libros de inventione spectantes.

Æschylus's De Aristophanis Thesmophoriazusis quæstiones duæ. (Question 1. Was the work published in 411 B. C.? Question 2. A critical examination of verses 1001-1023.)

The tax levy of Nausinikos and the Trierarch law of Periander and Demosthenes.

Current work (1 instance): Criticism of a member upon Bindseil's recent book on composition (in German) in the highest class of a gymnasium (college).

The critic was praised for the accuracy and intelligence displayed in his work; but was criticised for withholding his own judgments and for agreeing with many doubtful statements. In conclusion the director seized the occasion to speak from his own experience on the matter contained in the essay and to connect the whole discussion with the object of the seminarium, that is to say, the training for teaching in a gymnasium.

ANN ARBOR (1880-81).—ANNOUNCEMENT.

Course I (one semester).

The general purpose will be not as much to teach specific methods as to put pupils in firm possession of a body of doctrine out of which they may draw their own methods. Recitations and lectures four times a week.

The varieties, true, and common conception of labor and a basis for estimating its value. Qualities needed for superintendence, the supervision of schools and its value.

Delegated power, its rights and privileges; relation of the board to the people, of superintendent to board and to teachers, and his duties.

The purpose and methods of the teachers' meeting.

The nature, advantages, and disadvantages of a graded school.

The course of study.

Course II (one semester).

Historical, philosophical, and critical, embracing the history of education, the comparison and criticism of the systems of different countries, the outlines of educational science, the science of teaching, a critical discussion of theories and methods. A translation of Paroz's Histoire Universelle de la Pédagogie is in progress and this will be the basis in this portion of this course. Special studies on the reformers in education will be made.

The general purpose of the second course will be to teach general principles and doctrines rather than specific methods. Pupils will be taught in the assumption that they can form for themselves their own art out of the principles they have learned and that have sufficient versatility to adopt their methods to the requirements of circumstances.

Private reading required and a course in philosophy or on lectures XXXI-XXXVI, of Hamilton's Metaphysics.

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MAGDEBURG (1883-84).—ESSAYS BY THE MEMBERS OF THE SEMINARY.

Criticism of Jean Paul Richter's Lavana:
1. The Importance of Education.
2. Spirit and Principle of Education.
3. Culture through Religion.
4. Origin of Man and Instruction.
5. Bidding and Forbidding.

Proof of the last antinomy in Plato's Parmenides.
The justification and purpose of classical instruction.
Indirect questions in Greek.
What is Herbart's idea of instruction in a foreign language, and upon what has he founded it?
How far is Xenophon's prejudice for Laconia shown in his Hellenica?
Perthes's proposition to reform instruction in Latin.
Three hours of Virgil in a Gymnasium.
Montaingne as a Pedagogue.
Montaigne and Rousseau.
Locke's position in pedagogy.
Literary and historical study of Jodelle's Plays.

Criticism of an essay entitled "The character and purpose of classical instruction," by the Director, as follows:

"The paper shows a certain amount of industry; but the theme is not worked out, nor does the author go very deeply into his subject. The essay is more a reproduction of stale thoughts than the independent expressions of opinions of a mind filled with enthusiasm for the dead languages."

Having thus briefly reviewed the efforts to provide for the professional training of teachers at our higher institutions of learning, we now turn to consider the condition of the study of pedagogy in those institutions at the present day. Those interested in the work of the normal schools usually so called are referred to chapters xi–xiv of the Bureau's Report for 1888–89.

II.

It would be difficult to generalize on the pedagogical courses of the more important universities of this country, as they have few elements that are common. Two of these elements, however, are of considerable interest. One is that some universities have complete courses in pedagogy, whether graduate or undergraduate, while others make it an elective study for juniors and seniors in the regular college course. The other common element is that by establishing such a course or study these institutions recognize that the person who intends to teach should have instruction in matters and in methods that the candidate for the degree in arts or science does not receive. This may not be an attempt to recognize education or pedagogy as a science, as political economy or politics under the name of sociology has been recognized, but it is certainly placing pedagogy on the same footing as those subjects.

The only classification of the university courses in the science and art of education that is attempted here is the division into courses in which special pedagogy (methods in Latin, mathematics, etc.) receives the emphasis and those in which the emphasis is placed upon the science of education. To illustrate the first the recently established course at Harvard is used; to illustrate the second the course at Clarke University is given.

From its age, standing, and its conservative attitude in the matter of according to pedagogy a place among the sciences, Harvard University caused more than a passing interest when it announced that in its faculty of arts and sciences "courses for teachers on methods of instruction" had been established. These courses are of university grade; that is to say, they are only open to those who have graduated from a college of arts or of science. As was the case at the University of Michigan in 1879, there is a department or course of pedagogy proper, which is called "The history, theory, and art of teaching," and many courses, each concerned with the best methods of teaching the several studies of the college curriculum. The history, theory, and art of teaching course is divided into three departments, to wit: History of teaching and of educational theories, theory of teaching, and the art of teaching. The first and third are considered, either in the form of a lecture or discussion, twice a week during the year; the second, only once a week. In the first and second subjects two essays are required from the student, in the third the student is expected to observe the teaching in some designated school or schools in the vicinity of the university and, during the second half year, to present reports on what he has seen. In addition to this instruction given or directed by an assistant professor of the university, twelve lectures on "Topics in psychology of interest to teachers" are delivered by the professor filling the chair of philosophy at the university.

In special pedagogy there are thirteen subjects of study, Greek, Latin, English, German, French, history. mathematics, physics, chemistry, botany, zoöl-

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ogy, geology, and geography. The syllabus for Greek and chemistry will very well illustrate the method of conducting courses in language and in science.

GREEK.

(1) *Lectures* (once a week during the second half year). Topics: Discussion of existing methods of acquiring the elements. Outline of method recommended in teaching forms and syntax. Method of securing practical application of the knowledge acquired. The art of reading. Acquisition of a vocabulary. Translation and retranslation. Review of grammar during the second year's work in school. Wider application of the principles of "reading at sight" and of the "group system" in the acquisition of a vocabulary. Method of teaching the facts of geography, history, and antiquities. Greek prose composition.—Method of teaching the dialectical and syntactical peculiarities of Herodotus and Homer. Amounts to be read. Homeric verse. Geography, history, and antiquities. Literary treatment.—List of books to be used or consulted.

(2) *Practical exercises:* Discussion of topics suggested by members of the course.—Practice in outlining lessons, in construction of exercises, in formation of word groups, in selection of passages for translation at sight, in composing English passages to be translated into Greek, and in arranging facts of geography, history, and antiquities for presentation to a class.

CHEMISTRY.

(1) *Lectures* (five). Topics: Methods of teaching chemical science. The history of the development of the modern methods. Fit adjustment of theoretical and experimental teaching and the value of each as modes of mental discipline. How far chemistry can profitably be taught in the secondary and primary schools. Best means of securing enduring results. The best and most economical ways of installing and of furnishing a school laboratory, and the precautions required to insure profitable and safe work from immature students. Suggestions on the preparation and delivery of experimental lectures. The best system of teaching the three main branches of elementary chemistry, viz: General descriptive chemistry, mineralogy, or the natural history aspect of chemistry, and qualitative chemical analysis.

(2) *Additional exercises:* In order to gain a competent knowledge of class-room and laboratory methods of teaching chemistry, the student will find it essential to take such of the following courses as he has not already studied: Chemistry, A, B, C, 1 and 3. (See the general announcement of the courses of instruction provided by the faculty for 1891-92.)

The courses at Harvard are "adapted to the purposes of teachers and of persons intending to become teachers," not so with the curriculum of the department of education of Clarke University. At the latter institution the work in pedagogy is "primarily shaped to meet the special needs of two classes, one composed of those desiring to qualify themselves for professorships of pedagogy in universities, colleges, or normal schools, the other class composed of those who intend to become superintendents of State or city systems of education or wish to fit for other administrative positions." In following out this programme President Hall has constructed a curriculum that is quite an innovation. This curriculum falls, it would seem, under four heads—comparative pedagogy (if that term may be used to connotate the description and comparison of foreign systems of education), the social effects of higher education, the effect of the artificial or intellectual development of the child upon his natural or physical development, and special pedagogy, beginning with the three R's. The courses in neurology, experimental psychology, anthropology, and practical ethics (criminalogy, pauperism, and defectives) are open to the students.

Certificates of proficiency are given on completion of the course at both universities, whose course has been described, but at the University of Iowa something more than a testimonial of proficiency is conferred. After two years of successful teaching graduates of the university who have taken a full course in pedagogy may obtain the degree of Bachelor of Didactics. The course in pedagogy of this university—fully described in Circular of Information No. 8, 1891—is composed of three sections, known as history of education (fall term), educational science and systems (winter term), and school management and exemplification of methods of instruction (spring term). During the week preceding annual commencement the State board of education holds an examination at the university for the State certificate.

The teachers' department of the University of Tennessee has been organized to aid in educating teachers for the public and private schools of the State, but especially to give this class of public-school teachers an opportunity to secure a better education. "The course is in no sense a normal department. Our (Tennessee) teachers have already, in the various normal schools, college, and institutes, sufficient opportunty for that kind of training if they want it. The purpose of the university is to advance knowledge, and the object of this course is to stimulate its students to seek a complete, liberal education, and it is hoped that many of them will take a full college and university course. A due proportion of professional training is provided as a part of their education, but in every thing the thorough development of the man in all his powers will be the object aimed at, and not merely his training to perform a few professional pro-

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cesses. Even the work in the common-school branches has for its object the perfection of the teacher-student in these subjects."

A course practically of the same nature as that just spoken of is offered by the University of Wisconsin to graduates of the State normal schools who desire to improve their scholarship.

At Cornell, Columbia, and Princeton, under various titles, there are courses or quasi courses in pedagogy which juniors or seniors of the regular college course may elect. Of these the course at Cornell has the name of "The science and art of teaching."

Two schools of pedagogy which are connected with universities have peculiarities that require mention. The comparatively elaborate system of pedagogical degrees conferred by the University of the City of New York is based upon the idea inaugurated at Iowa, that a degree should follow successful teaching and not precede the efforts of the holder in the school room, and further that the course in the science and art of teaching is a professional course to be pursued by persons whose general education has been finished at a college or at a normal school. The conditions under which the degrees are conferred are as follows:

DOCTOR OF PEDAGOGY.

Each student of the school who has been a member of the senior class for two or more years and a resident student at least one year, will be entitled to the degree of doctor of pedagogy upon the following conditions:
(1) He must have been credited with attendance upon the required lectures.
(2) He must have been credited with attendance upon the required seminaria.
(3) He must have passed an examination upon each of the five courses.
(4) He must have presented the prescribed final thesis as defined below and have received approval of the same.
(5) He must have presented, upon entering the school, a certificate showing seven years' successful experience in school-room work.

MASTER OF PEDAGOGY.

Each student of the school who has been a member of the junior class for one or more years, and a resident student at least one year, will be entitled to the degree of master of pedagogy upon the following conditions:
(1) He must have been credited with attendance upon the required lectures.
(2) He must have passed the examination upon each of the four courses first named.
(3) He must present a certificate showing three years' successful experience in school-room work.

The features of the department of pedagogy of the University of South Carolina that call for special mention are (1) the establishment of an undergraduate and graduate course and (2) the introduction of modeling and blackboard drawing as a part of the undergraduate course.

Turning now to the schools of pedagogy which are unconnected with a university, it seems advisable to take up the recently established State Normal College at Albany, N. Y., since the American prototype of this class of schools, the New York College for the Training of Teachers, has been fully discussed in chapter VIII of Circular No. 8, 1891, of this Bureau, and in the Bureau's annual reports.

Of the several schools which constitute the normal-school system of New York the school at Albany was the first to be established, owing its existence to the incompetency of the normal classes of the academies to fill their proper functions. In Michigan, and in other States, the State university was called upon to give the higher education in the science and art of teaching required by the times, but in the States of which the Union was originally composed, with the exception of New York, higher education is not under State influences, much less under State control, and in creating a school of pedagogy even, New York selected one of her own schools for the purpose, and her first State Normal School became the first State Normal College.

This college has been established to give instruction in the science and art of teaching. It is a purely professional institution, consequently nothing will be studied or taught in it which does not bear directly upon the business of teaching. Advanced courses in mathematics, the natural sciences, rhetoric, and such studies can not be pursued in the college, inasmuch as only methods of teaching those subjects are taught, a knowledge of them being a prerequisite. Without dwelling on the particulars of the administration of the college which is just entering upon its work, it suffices to say that there are three courses of study,

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namely, the English, the classical, and the kindergarten. The minimum age for admission to the first and second courses is seventeen years, while for the kindergarten course the minimum age is fixed at eighteen. The only course which leads to a degree (B. Ped.) is the classical course, which is of two years. Its subjects are as follows:

COURSE OF STUDY.

First term.—Philosophy of education, school economy, drawing.
Methods of teaching the following subjects, viz: Number, place, language, reading, arithmetic, geography, grammar, penmanship, botany, physiology, zoölogy, composition, color, object lessons. A course of reading connected with professional work.
Second term.—Methods of teaching the following subjects: Algebra, physics, Latin, mineralogy and geology, geometry, chemistry, rhetoric, astronomy, preparation of specimens and apparatus, discussion of educational themes.
Third term.—Methods of teaching the following subjects: Latin, Greek or French or German, history, physical geography, solid geometry and mensuration, civil government, trigonometry, bookkeeping, English literature, sanitary science, school architecture, preparation of specimens and apparatus, discussion of educational themes.
Fourth term.—History of education, school law, kindergarten methods.
Methods of teaching the following subjects, viz: Music, drawing, physical culture, elocution, familiar science, teaching in model school, a course of reading connected with professional work, discussion of educational themes, school supervision.

Among four hundred institutions carried on the lists of this Bureau as universities or colleges one hundred and fourteen report students in teachers' courses to the number of 3,414. In other words, nearly 8 per cent of the enrollment of the four hundred institutions were studying in the teachers' course or department of one hundred and fourteen colleges. Of these one hundred and fourteen colleges the great majority are situated in the Mississippi Valley; scarcely any of them are located in the New England or Middle States. With few exceptions these departments, or courses, are nothing more than normal schools, which are usually classed among institutions of secondary grade. In many of these departments Latin is introduced as a required or as an optional study: in most cases, however, the course is concerned with the studies of the grammar grade of the public schools, with high-school mathematics and science. Bible instruction and surveying appear occasionally. In some cases it is very evident that the teachers' course is constructed on the interchangeable parts plan. Thus if history of education, school management, etc., be omitted and less technical subjects be introduced the preparatory course of the college or university is formed. At the completion of the course, which is intended, it would seem, to prepare for teaching in the district schools of the State, a certificate of proficiency is given. The length of the course of the schools of the class now under consideration is generally of three or four years, frequently it is of two, sometimes of one. In the case of a one or two years' course, however, the course may be looked upon as special or irregular. In conclusion it may be said that an intelligent graduate of a thoroughly taught high school who had attentively read Compayré's History of Pedagogical Ideas, a book on methods and management, and Sully's Psychology, for example, might graduate immediately and with honor from the great majority of the normal departments or teachers' courses of our colleges and universities.

The Normal Department of the National College for the Deaf at Washington presents several unique features. To supply a limited demand for specially trained hearing-and-speaking teachers in schools for deaf-mutes, a few modestly endowed fellowships are available annually. The candidates for fellowships are graduates of approved colleges and universities specially certified by instructors in these institutions, and nominated by heads of schools for the deaf. The degree of Master of Arts is conferred upon fellows satisfactorily completing the course of study and practice. Harvard, Williams, Amherst, Yale, University of Mississippi, De Pauw, etc., have been represented in this department. The course of study includes lectures and assigned readings with required essays upon general or "comparative" pedagogics; class-room and "seminary" investigation of the literature of deaf-mute instruction; the dispassionate consideration of rival methods; the mastery of means of communication with deaf-mutes; lectures upon anatomy and physiology of the vocal organs, and laryngoscopy; the study of English phonetics, mechanism of elements of speech, Bell's Visible Speech, and observation and practice classes in speech and "lip-reading," with detailed weekly reports of work done, occasional examinations, and a thesis. In the course of the year each member of the class is expected to teach at least one deaf-mute pupil to speak. The same course of study has been pursued by candidates for certificates only.[1]

[1] As the pages go through the press Prof. Gordon, in charge of the Articulation Department of the National College for the Deaf, kindly furnishes the foregoing sketch of the work of one of his departments.

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CHAPTER XI.

STATISTICS OF PROFESSIONAL INSTRUCTION, 1889–90.

The diagrams and maps on pages 838 *et seq.*, the consolidated statistics given on pages 3 and 4, and the general discussion of the curricul of the several classes of professional schools leave no occasion to discuss the statistics of the year. Indeed, to do so would be but to repeat what is said far more concisely in h summaries which follow. These summaries have not been drawn with the intent of showing statistically the entire life of the various institutions during the year under review, but with the view of presenting a few primary facts, to wit, the number of schools, the number of instructors and students in them, of graduates from them, and, as far as the replies of the Bureau's correspondents will allow, the proportion of the students having a degree in letters or science. If the secondary statistics, such as the financial particulars, are missed, they may readily be found by examining the report preceding, where they have been given with as much accuracy as the character of the institutions concerned (university departments, independent schools occupying rented buildings, etc.) will admit. Matters of this subordinate kind do not vary sufficiently within a twelvemonth to require annual insertion. Even in the case of the colleges endowed by the acts of Congress of 1862 and August 30, 1890, it is preferable to wait and use the more reliable figures which the act of the latter date exacts than those furnished to the Bureau under the provisions of the law of 1862. Table 6, therefore may be regarded as a compilation that falls short in its totals of the true amounts.

In the case of the normal schools, the amount received from public funds shows a great increase over that reported for the preceding year. It is evident that this is due in some measure to the separation of the question usually asked in the Bureau's form of inquiry into two items, namely, appropriation for support and appropriation for building. In former years it would appear that, as a rule, only the amount for support was reported. Assuming this hypothesis for a moment as true, an increase of only $28,000 is shown between the appropriation for the support of public normal schools for the years 1888–89 and 1889–90. This amount is too small, as appropriations for building were undoubtedly included in 1888–89 which have been rigorously excluded in 1889–90.

TABLE 1.—*Summary of statistics of schools of medicine, dentistry, pharmacy, for nurses, and veterinarians.*

	No. of schools	Instructors.		Students.		Graduates, 1889–90.	Students having degree in letters or science.	
		Resident.	Non-resident.	Male.	Female.		No. schools reporting for 1889–90.	Students having degree.
United States	228	3,631	356	21,784	2,458	6,872	.....	.....
(*a*) BY CLASSES.								
Preparatory	2	14	1	44	0	4	1	5
Regular	98	2,003	117	12,873	648	3,853	60	1,219
Eclectic	9	94	26	661	58	221	5	77
Homeopathic	14	247	21	1,020	144	390	12	83
Physio-medical	1	11	7	32	4	15	1	3
Graduate	10	303	7	1,144	32	83	.....	.....
Dental	27	455	86	2,643	53	943	23	100
Pharmaceutical	30	179	4	2,811	60	759	21	35
Nurse training	35	240	79	93	1,459	471	.....	.....
Veterinary	7	85	8	403	0	143	6	4

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TABLE 1.—*Summary of statistics of schools of medicine, dentistry, etc.*—Continued.

	No. of schools	Instructors.		Students.		Graduates, 1889-90.	Students having degree in letters or science.	
		Resident.	Non-resident.	Male.	Female.		No. schools reporting for 1889-90.	Students having degree.
(*b*) BY GEOGRAPHICAL DIVISIONS.								
North Atlantic	74	1,413	130	8,759	1,630	2,652		
South Atlantic	27	367	37	2,274	74	706		
South Central	29	334	21	2,806	262	1,026		
North Central	84	1,302	151	7,415	423	2,297		
Western	14	215	17	530	69	189		
(*c*) BY STATES.								
Regular.								
Maine	1	2	9	81	0	16	1	17
New Hampshire	1	3	12	83	0	24	1	13
Vermont	1	9	7	205	0	48	1	39
Massachusetts	2	77	6	334	18	81	2	129
Connecticut	1	16	3	55	0	10	1	17
New York	9	318	6	2,502	117	657	7	193
Pennsylvania	5	220	0	1,287	181	427	4	284
Maryland	5	90	0	741	20	223	1	58
District of Columbia	4	85	0	342	15	78	3	22
Virginia	2	27	0	173	0	29	2	29
North Carolina	1	7	0	44	0	5		
South Carolina	1	11	0	56	0	23		
Georgia	4	49	2	343	12	124	2	8
Kentucky	4	65	0	1,078	0	404	2	10
Tennessee	4	75	2	812	3	310	3	139
Alabama	1	14	0	115	0	36		
Louisiana	2	28	3	352	2	93	2	87
Texas	1	12	0	13	0	2		
Arkansas	1	18	0	78	0	17		
Ohio	10	170	6	875	32	277	6	21
Indiana	3	46	19	135	5	44	3	13
Illinois	4	145	7	904	110	293	2	21
Michigan	3	72	0	540	55	143	2	41
Minnesota	2	51	1	139	7	23	1	1
Iowa	3	35	10	295	11	94	1	1
Missouri	9	199	12	924	5	264	6	54
Nebraska	1	18	3	24	2	4	1	0
Colorado	3	46	7	84	15	18	2	4
Oregon	2	32	1	89	10	24	1	2
California	3	63	1	230	28	62	3	27
North Atlantic Division	20	645	43	4,547	316	1,263	17	602
South Atlantic Division	17	269	2	1,689	47	452	8	107
South Central Division	13	212	5	2,448	5	862	7	236
North Central Division	35	736	58	3,836	227	1,142	22	152
Western Division	8	141	9	353	53	104	6	33
United States	93	2,003	117	12,873	648	3,853	60	1,220
Eclectic.								
New York	1	13	10	78	7	12	1	14
Georgia	1	7	0	46	0	16		
Ohio	2	18	7	284	28	91	1	25
Indiana	1	10	3	44	6	13	1	18
Illinois	1	16	3	91	2	30	1	16
Iowa	1	6	2	26	3	8		
Missouri	1	13	1	61	12	25	1	4
California	1	11	0	31	0	26		
North Atlantic Division	1	13	10	78	7	12		
South Atlantic Division	1	7	0	46	0	16		
North Central Division	6	63	16	506	51	167		
Western Division	1	11	0	31	0	26		
United States	9	94	26	661	58	221	5	77

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TABLE 1.—*Summary of statistics of schools of medicine, dentistry, etc.*—Continued.

	No. of schools	Instructors.		Students.		Graduates, 1889–90.	Students having degree in letters or science.	
		Resident.	Non-resident.	Male.	Female.		No. schools reporting for 1889–90.	Students having degree.
(c) BY STATES—continued.								
Homeopathic.								
Massachusetts	1	29	7	68	38	27	1	15
New York	2	53	1	129	36	53	2	13
Pennsylvania	1	23	0	203	0	64	1	10
Ohio	2	32	3	146	18	51	2	24
Illinois	2	44	2	327	0	112	1	21
Michigan	1	4	1	52	20	21	1	0
Minnesota	1	9	5	8	0	2	1	0
Iowa	1	4	2	26	8	10	1	0
Missouri	2	33	0	52	13	30	1	0
California	1	16	0	9	11	10	1	0
North Atlantic Division	4	105	8	400	74	144	.....	.....
North Central Division	9	126	13	611	59	226	.....	.....
Western Division	1	16	0	9	11	10	.....	.....
United States	14	247	21	1,020	144	380	12	83
Dentistry.								
Massachusetts	2	39	0	111	3	44	2	2
New York	1	37	2	247	0	80	1	5
Pennsylvania	3	68	0	696	19	256	2	28
Maryland	2	43	35	296	0	110	2	53
District of Columbia	2	21	0	23	1	12	2	0
Kentucky	1	12	1	57	0	12	1	0
Tennessee	3	18	0	108	0	64	2	2
Ohio	1	10	0	160	1	66	.....	.....
Indiana	1	15	8	65	3	26	1	2
Illinois	4	88	10	433	9	106	4	6
Michigan	1	10	2	101	7	42	.....	.....
Minnesota	1	14	0	26	2	6	1	0
Iowa	1	8	14	112	5	43	1	2
Missouri	2	36	6	148	0	49	2	0
Colorado	1	11	0	11	2	11	1	0
California	1	25	8	59	1	16	1	0
North Atlantic Division	6	144	2	1,054	22	380	5	35
South Atlantic Division	4	64	35	319	1	122	4	53
South Central Division	4	30	1	165	0	76	3	2
North Central Division	11	181	40	1,035	27	338	9	10
Western Division	2	36	8	70	3	27	2	0
United States	27	455	86	2,643	53	943	23	100
Pharmacy.								
Massachusetts	1	8	0	258	5	28	1	5
New York	4	25	3	395	5	122	3	2
Pennsylvania	2	10	0	660	7	198	2	1
Maryland	1	3	0	120	0	43	.....	.....
District of Columbia	2	7	0	74	2	31	.....	.....
South Carolina	1	10	0	26	0	8	1	0
Kentucky	2	7	0	68	23	21	2	17
Tennessee	1	9	0	28	0	6	.....	.....
Louisiana	1	3	0	39	2	10	.....	.....
Ohio	2	20	0	128	1	26	2	0
Indiana	1	5	0	52	0	15	1	1
Illinois	2	14	0	512	5	128	1	0
Michigan	1	8	0	82	1	34	1	3
Wisconsin	1	4	0	34	1	8	1	0
Minnesota	1	4	0	2	1	1	1	0
Iowa	2	9	1	46	1	2	1	2
Missouri	2	11	0	181	1	49	2	3
Kansas	1	11	0	39	3	7	1	1

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TABLE 1.—*Summary of statistics of schools of medicine, dentistry, etc.*—Continued.

	No. of schools	Instructors.		Students.		Graduates, 1889-90.	Students having degree in letters or science.	
		Resident.	Non-resident.	Male.	Female.		No. schools reporting for 1889-90.	Students having degree.
(c) BY STATES—continued.								
Pharmacy—Continued.								
Colorado	1	2	0	11	0	4	.....	.....
California	1	9	0	56	2	18		0
North Atlantic Division	7	43	3	1313	17	348	6	8
South Atlantic Division	4	20	0	220	2	82	1	0
South Central Division	4	19	0	135	25	37	2	17
North Central Division	13	86	1	1076	14	270	11	10
Western Division	2	11	0	67	2	22	1	0
United States	30	179	4	2811	60	759	21	35
Nurse training.								
Vermont	1	5	0	0	17	3	.....	.....
Massachusetts	5	61	18	29	303	96	.....	.....
Connecticut	1	0	8	0	67	22	.....	.....
Rhode Island	1	17	1	0	20	6	.....	.....
New York	12	81	25	56	477	175	.....	.....
New Jersey	2	9	3	9	52	20	.....	.....
Pennsylvania	4	0	8	0	231	89	.....	.....
District of Columbia	1	7	0	0	24	6	.....	.....
Indiana	1	4	2	0	35	6	.....	.....
Illinois	1	0	3	0	100	29	.....	.....
Michigan	3	56	6	8	45	2	.....	.....
Minnesota	1	0	3	0	23	8	.....	.....
Missouri	1	0	1	0	29	6	.....	.....
California	1	0	1	0	36	3	.....	.....
North Atlantic Division	26	173	63	86	1167	411	.....	.....
South Atlantic Division	1	7	0	0	24	6	.....	.....
South Central Division	7	60	15	8	232	51	.....	.....
North Central Division	1	0	1	0	36	3	.....	.....
United States	36	240	79	93	1459	471	.....	.....

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TABLE 2.—*Summary of Statistics of Schools of Theology for 1889–90.*

	No. of schools.	Instructors.		Students.	Graduates for 1889–90.	Students having degree in letters and science.	
		Resident.	Nonresident.			No. of schools reporting for 1889–'90.	Students having degree.
United States	145	643	101	7,013	1,372	112	1,559
North Atlantic Division	44	266	40	2,535	628	34	983
South Atlantic Division	22	84	2	789	114	14	50
South Central Division	17	52	10	635	107	13	56
North Central Division	58	233	30	2,952	512	49	468
Western Division	4	8	19	52	11	2	2
North Atlantic Division:							
Maine	2	10	0	48	23	2	4
Massachusetts	7	50	8	371	76	6	181
Connecticut	3	27	8	227	66	2	161
New York	11	70	9	727	166	8	205
New Jersey	5	27	3	386	107	5	207
Pennsylvania	16	82	12	776	190	11	225
South Atlantic Division:							
Maryland	3	20	0	144	11	1	2
District of Columbia	3	18	0	127	12	3	19
Virginia	3	14	0	190	58	1	0
North Carolina	4	10	0	96	2	3	9
South Carolina	6	17	0	104	20	4	17
Georgia	3	5	2	128	11	2	3
South Central Division:							
Kentucky	3	17	0	324	35	2	8
Tennessee	7	22	9	213	25	4	28
Alabama	3	3	0	64	24	3	6
Louisiana	3	6	1	56	10	3	1
Texas	1	4	0	28	13	1	13
North Central Division:							
Ohio	12	53	11	418	105	9	138
Indiana	3	12	4	163	29	5	3
Illinois	16	77	7	1146	198	13	114
Michigan	3	9	0	91	6	3	9
Wisconsin	5	19	3	210	28	3	29
Minnesota	4	24	3	248	29	4	20
Iowa	7	18	1	262	26	6	6
Missouri	5	14	0	341	82	4	149
Nebraska	2	4	1	34	9	2	0
Kansas	1	3	0	39	------	------	------
Western Division:							
Colorado	1	------	------	3	------	------	------
California	3	8	10	49	11	2	2

Schools, instructors, and students in schools of theology, by denominations.

Denominations.	Number of schools.	Number of instructors.	Number of students.
Baptist	17	a74	1,027
Free-Will Baptist	2	9	54
Presbyterian	14	81	884
United Presbyterian	2	15	85
Cumberland Presbyterian	2	10	64
Reformed Presbyterian	1	3	24
Associated Reformed Presbyterian	1	3	7
Methodist Episcopal	17	66	884
Methodist Episcopal South	2	9	79
African Methodist Episcopal	1	4	18
Methodist Protestant	2	9	72
Lutheran	14	56	872
German Evangelical	1	3	79
Norwegian Augustana Synod (Lutheran)	3	a7	62
Evangelical Association	1	3	26
Roman Catholic	18	93	946
Congregational	12	99	673
Christian	7	32	390
Protestant Episcopal	12	72	332
Reformed Church in the United States	4	17	89

a All schools not reporting this item.

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Schools, instructors, and students in schools of theology, by denominations—Continued.

Denominations.	Number of schools.	Number of instructors.	Number of students.
United Brethren	2	8	76
Undenominational	2	15	76
Universalist	3	16	68
Hebrew	1	8	38
Reformed Church (Dutch)	2	8	46
Unitarian	1	7	35
New Church	1	5	7
Total	145	a728	7,013

a Two schools not reporting students, excluded here.

TABLE 3.—*Summary of Statistics of Schools of Law.*

	No. of schools.	Instructors.		Students.	Graduates for 1889-90.	Students having degree in letters or science.	
		Resident.	Nonresident.			No. of schools reporting for 1889-90.	Students having degree.
United States	54	278	68	4518	1424	33	963
North Atlantic Division	9	83	28	1505	314	8	632
South Atlantic Division	14	57	6	1010	387	4	67
South Central Division	10	28	2	352	163	7	31
North Central Division	18	98	32	1536	538	11	205
Western Division	3	12	0	115	22	3	28
North Atlantic Division:							
Massachusetts	2	27	4	445	100	2	253
Connecticut	1	12	10	111	42	1	50
New York	5	39	14	773	122	4	286
Pennsylvania	1	5	0	176	50	1	43
South Atlantic Division:							
Maryland	1	7	0	108	33	----	----
District of Columbia	4	31	1	582	247	----	----
Virginia	2	4	0	208	69	2	50
West Virginia	1	2	0	10	0	----	----
North Carolina	1	2	0	35	----	----	----
South Carolina	2	2	0	28	4	1	2
Georgia	3	9	5	39	34	1	15
South Central Division:							
Kentucky	1	3	0	30	15	----	----
Tennessee	4	9	0	138	65	3	16
Alabama	1	3	0	21	18	1	11
Mississippi	1	3	2	15	10	1	3
Louisiana	1	5	0	49	24	1	0
Texas	1	2	0	79	30	----	----
Arkansas	1	3	0	20	1	1	1
North Central Division:							
Ohio	1	6	0	166	91	1	41
Indiana	3	9	4	106	23	2	13
Illinois	4	18	0	193	20	----	----
Michigan	1	3	3	405	147	1	56
Wisconsin	1	6	5	114	59	1	9
Minnesota	1	17	0	134	41	1	32
Iowa	2	15	5	155	70	2	29
Missouri	2	14	4	147	51	1	21
Nebraska	1	4	3	32	0	1	0
Kansas	2	6	8	84	36	1	4
Western Division:							
Oregon	2	8	0	39	9	2	9
California	1	4	0	76	13	1	30

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TABLE 4.—*Summary of statistics of colleges endowed with the national-land grant.*

	Number of schools.	Instructors in—		Students in—			
		Preparatory departments.	Collegiate departments.	Preparatory departments.	Collegiate departments.		Postgraduate departments.
					Male.	Female.	
United States	36	124	611	3,084	5,417	774	158
North Atlantic Division	8	13	293	87	2,191	44	49
South Atlantic Division	12	61	64	1,577	725	127	1
South Central Division	6	24	82	987	1,002	142	30
North Central Division	6	21	139	259	1,365	370	75
Western Division	4	5	33	174	134	91	3
North Atlantic Division:							
Maine	1	0	12	0	128	1	2
New Hampshire	1	0	11	0	31	0	0
Massachusetts	2	0	102	0	994	33	14
Connecticut	1	0	31	0	255	0	29
New York	1	0	100	0	608	----	0
New Jersey	1	9	20	----	79	0	1
Pennsylvania	1	4	17	87	96	10	3
South Atlantic Division:							
Delaware	1	0	8	0	82	0	0
Maryland	1	0	7	0	45	0	0
Virginia	2	43	11	704	127	0	0
North Carolina	1	0	7	0	71	0	1
South Carolina	1	3	4	151	15	1	0
Georgia	5	15	19	584	300	126	0
Florida	1	0	8	78	86	0	0
South Central Division:							
Kentucky	1	5	13	169	238	123	2
Alabama	1	2	16	43	197	0	7
Mississippi	2	4	19	350	219	1	8
Texas	1	0	20	0	265	0	7
Arkansas	1	13	14	485	83	18	6
North Central Division:							
Indiana	1	8	32	115	241	47	26
Illinois	1	5	31	113	293	51	6
Michigan	1	0	24	0	342	10	26
Iowa	1	6	23	31	119	69	7
Missouri	1	2	4	----	52	17	0
Kansas	1	0	25	0	318	176	10
Western Division:							
Colorado	1	0	13	13	44	17	0
New Mexico	1	2	4	50	18	3	0
Utah	1	1	6	50	20	10	0
Oregon	1	2	10	61	52	61	3

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TABLE 5.—*Summary of statistics of technological schools not endowed with the national land grant.*

	Number of schools.	Instructors.		Students in—			
		Preparatory departments.	College departments.	Preparatory departments.	College departments.		Graduate departments.
					Male.	Female.	
United States	27	18	429	400	3,037	102	45
North Atlantic Division	13	0	289	6	1,964	36	37
South Atlantic Division	4	1	45	37	474	6	0
North Central Division	6	0	74	97	533	50	8
Western Division	4	0	21	66	66	10	0
North Atlantic Division:							
New Hampshire	2	0	17	0	68	0	6
Vermont	1	0	8	6	48	0	0
Massachusetts	3	0	55	0	233	0	3
Connecticut	1	0	5	0	41	0	0
New York	2	0	56	0	418	0	
New Jersey	2	0	48	0	308	0	6
Pennsylvania	2	0	100	0	848	36	22
South Atlantic Division:							
District of Columbia	1	0	16	0	107	6	0
Virginia	2	1	15	37	219	0	0
Georgia	1	0	14	0	148	0	0
North Central Division:							
Ohio	1	0	11	0	0	0	0
Indiana	1	0	10	0	157	0	1
Michigan	1	0	9	0	47	0	2
Missouri	1	0	21	0	71	0	0
South Dakota	2	0	23	97	178	50	5
Western Division:							
Montana	1	0	14	66	12	10	0
Colorado	1	0	7	0	54	0	0
California	2	17	0	194	0	0	0

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TABLE 6.—*Annual income and the property of colleges endowed with the national land grant of 1862, compiled from several sources, June 30, 1890.*

	Income from—			Property.	
	State.	Funds.	Tuition fees.	Grounds, buildings, and apparatus.	Productive funds.
Alabama	$16,556	$20,280	$1,005	$140,000	$263,500
Arkansas	*17,500	*10,400	*1,000	*300,000	164,589
Colorado	38,000	1,300	2,000	110,000	(a)
Connecticut (Yale University)	0	164,589	0	Unknown	3,147,894
Delaware	0	4,980	8,000	81,000	83,000
Florida	10,800	9,000	728	54,000	153,000
Illinois	46,046	24,606	27,833	460,000	450,000
Indiana	75,000	170,000	6,000	380,000	340,000
Iowa	0	42,000	0	850,000	648,000
Kansas	8,900	34,546	654	239,750	500,086
Kentucky	24,000	9,900	2,500	313,000	165,000
Maine	10,000	10,000	3,500	201,000	231,300
Maryland	6,000	6,170	900	90,000	115,000
Massachusetts	20,000	39,957	168,194	1,114,824	723,098
Michigan	20,973	46,322	0	450,000	484,636
Mississippi	27,393	10,608	1,021	241,331	212,150
Missouri	7,500	3,890	1,900	73,000	(b)
New Hampshire	3,000	7,000	0	90,000	130,000
New Jersey	0	6,960	----------	----------	116,000
New Mexico	10,000	0	300	36,000	(c)
New York (Cornell University)	0	265,154	86,062	2,500,576	4,854,690
North Carolina	20,000	7,500	160	54,000	125,000
Oregon	37,500	10,500	1,000	95,000	93,985
Pennsylvania	59,750	31,020	0	340,000	517,500
South Carolina	10,800	0	15,000	195,000	----------
Texas	20,000	14,280	3,000	375,000	209,000
Utah	34,000	0	405	55,000	(b)
Virginia	14,079	31,154	0	635,000	375,000
Total (as far as reported)	537,797	977,116	331,162	9,473,481	14,094,428

* For 1888–89.
a Land mostly unsold.
b Reported in college table.
c Act of August 30, 1890.

TABLE 7.—*Annual income and the property of colleges not endowed with the national land grant, June 30, 1890.*

	Income from—			Property.	
	State.	Funds.	Tuition fees.	Grounds, buildings, and apparatus.	Productive funds.
California	$ 0	$28,000	$5,000	$211,000	$1,100,000
Colorado	$33,000	0	0	67,000	0
Connecticut	58,000	0	590	76,500	0
District of Columbia	0	0	4,000	----------	0
Georgia	18,000	0	0	130,000	0
Indiana	0	24,000	12,500	195,000	450,000
Massachusetts	0	35,500	9,980	275,000	a760,000
Michigan	b52,000	0	0	160,000	0
Montana	0	0	1,200	152,000	0
New Hampshire	0	c3,000	0	----------	65,000
New Jersey	----------	24,000	30,000	----------	400,000
Ohio	0	50,000	----------	270,000	2,000,000
Pennsylvania	0	c120,000	27,000	1,015,000	2,000,000
South Dakota	43,688	0	0	167,000	(d)
Vermont	1,500	0	500	35,000	0
Virginia	0	1,200	e110,894	265,000	20,000
Total	206,188	286,600	201,664	3,038,500	6,795,000

a Does not include the endowment of the Bussey Institute which will be "very large."
b Half of biennial appropriation.
c Estimated at 6 per cent.
d Unsold lands.
e From all sources.

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TABLE 8.—*Summary of statistics of normal schools supported in whole or in part by public funds, for 1889-90.*

	Number of schools.	Instructors		Pupils.					Normal graduates 1889-90.
		In professional department.	Not in professional department.	In professional department.		Not in professional department.		Model or practice school pupils included in columns 6 and 7.	
				Male.	Female.	Male.	Female.		
	1	2	3	4	5	6	7	8	9
				374		393			
The United States	135	1,182	227	8,795	17,748	5,765	7,439	8,238	4,413
				374		393			
North Atlantic Division	53	517	98	3,219	8,354	2,037	3,471	3,883	2,389
South Atlantic Division	21	123	22	872	1,184	723	597	159	302
South Central Division	19	130	59	963	1,231	889	942	767	335
North Central Division	35	353	43	3,456	6,076	1,817	1,987	2,889	1,144
Western Division	7	59	5	285	903	299	442	540	243
North Atlantic Division:									
Maine	4	22	2	157	474	126	97	223	117
New Hampshire	2	12	0	3	111	0	1	0	34
Vermont	2	15	0	42	187	0	0	0	68
Massachusetts	11	83	2	122	1,370	156	244	400	411
Rhode Island	1	8	0	6	194	0	0	0	37
Connecticut	2	25	4	2	405	0	0	0	107
				374		398			
New York	14	108	38	582	2,952	723	2,101	1,553	954
New Jersey	3	19	15	19	371	493	529	1,022	136
Pennsylvania	14	165	37	2,286	2,290	539	499	685	525
South Atlantic Division:									
Maryland	1	10	1	24	280	3	11	12	68
District of Columbia	1	5	2	6	34	0	0	0	40
Virginia	4	50	16	300	307	514	326	147	84
West Virginia	6	29	2	407	383	46	24	0	70
North Carolina	5	14	1	51	89	81	135	0	9
South Carolina	1	5	0	0	46	0	0	0	31
Georgia	1	3	0	75	40	50	65	0	0
Florida	2	7	0	9	5	29	36	0	0
South Central Division:									
Kentucky	1	6	0	0	36	100	100	200	36
Tennessee	3	37	3	219	267	64	47	96	108
Alabama	7	44	37	347	392	421	482	355	97
Mississippi	3	9	14	74	38	240	230	0	4
Louisiana	2	15	2	12	182	64	83	116	8
Texas	2	15	3	211	240	0	0	0	82
Arkansas	1	4	0	100	76	0	0	0	0
North Atlantic Division:									
Ohio	4	24	10	35	191	479	470	813	150
Indiana	3	33	7	341	545	22	24	16	72
Illinois	3	30	3	458	766	401	352	385	129
Michigan	1	20	0	275	536	0	0	0	116
Wisconsin	6	71	15	418	805	321	477	608	137
Minnesota	5	53	0	252	552	261	292	427	191
Iowa	4	24	2	264	620	115	100	205	73
Missouri	4	42	0	774	905	48	60	118	131
North Dakota	1	3	1	20	12	16	14	30	0
South Dakota	2	19	1	94	197	74	66	80	10
Nebraska	1	10	2	163	311	0	0	0	82
Kansas	1	15	2	362	546	80	132	212	53
Western Division:									
Arizona	1	1	0	12	18	2	1	0	2
Oregon	3	13	5	82	126	124	144	70	34
California	3	45	0	191	759	173	297	470	207

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TABLE 9.—*Finances and property of public normal schools (many city normal schools not included) for 1889–90.*

	Received from—			Value of grounds, buildings, and apparatus.	Productive funds.	Peabody fund distribution (for normal schools, scholarships, and institutes).
	State, county, or city for—		Other sources.			
	Support.	Building.				
Alabama	$25,700	$2,250	a$8,606	b$304,750	$0	$7,625
Arizona	6,000	0	0	103,000	0	0
Arkansas	3,000	0	253	40,500	0	4,000
California	71,500	12,500	0	292,250	0	0
Connecticut	21,520	25,000	0	125,000	0	0
Florida	8,000	2,000	0	9,300	0	0
Georgia	800	.....	0	.....	0	4,335
Illinois	82,704	4,600	c12,269	370,000	0	0
Indiana	31,000	150,000	3,564	251,600	0	0
Iowa	22,050	0	5,572	114,050	0	0
Kansas	5,175	0	d25,000	120,375	270,000	0
Kentucky	4,320	0	0	30,300	0	0
Louisiana	9,600	0	0	(e)	0	6,065
Maine	18,000	9,800	1,554	84,000	0	0
Maryland	10,500	0	13,500	140,000	0	0
Massachusetts	£0,770	304,100	2,198	f602,100	.....	0
Michigan	42,875	0	4,200	230,748	70,000	0
Minnesota	57,500	0	3,300	390,400	0	0
Mississippi	4,520	510	3,082	72,260	0	0
Missouri	35,000	0	11,648	437,000	0	0
Nebraska	20,787	13,000	5,000	123,500	(g)	0
New Hampshire	9,000	60,000	0	40,000	0	0
New Jersey	22,546	40,000	15,020	545,000	0	0
New York	354,061	54,243	11,042	2,219,658	8,000	0
North Carolina	5,017	0	300	4,550	0	4,945
North Dakota	500	0	10,000	No data.	(h)	0
Ohio	4,500	0	1,000	0	0	0
Oregon	682	0	6,160	40,700	0	0
Pennsylvania	i140,000	145,000	(i)	2,058,772	0	0
Rhode Island	13,973	0	0	41,500	0	0
South Carolina	1,050	0	30	300	0	6,039
South Dakota	28,500	0	650	84,700	0	0
Tennessee	10,350	3,000	4,100	194,250	0	j29,725
Texas	32,500	65,000	0	140,000	0	6,100
Vermont	l9,610	.....	1,014	38,480	0	0
Virginia	45,329	8,800	10,425	749,501	244,900	6,895
West Virginia	12,380	6,330	504	181,800	15,000	5,000
Wisconsin	l50,000	0	11,819	360,000	1,500,000	0
United States	1,312,419	900,533	171,843	10,552,744	2,107,900	80,729

a One school not answering.
b At least 1 school occupies a rented building, the value of which has not been included.
c No answer from 1 school.
d Of this $16,500 was interest on endowment.
e No answer.
f Not including new buildings in course of erection.
g Twelve thousand acres of land, some of which is sold.
h The $10,000 in column 3 is "from bonds of endowment lands," but the answer to the question as to productive funds is "none."
i At page 404 of the Bureau's report for 1887–88 the peculiar system of giving free tuition in Pennsylvania normal schools is described. The appropriation directly made by the legislature is $7,500 to each school. Some schools include the amount indirectly appropriated by the State with that directly appropriated; others return the indirect appropriation as the amount of the legislative grant and the direct appropriation as a benefaction, etc. The amount given in column 1 is estimated. The aid from other sources can not always be given accurately by the schools, as their system of bookkeeping includes board, etc.
j $12,000 of this was for building.
k Includes statistics of 1887–88 for 1 school that has failed to report for two years.
l Each of the 5 schools of Wisconsin gets $10,000 by appropriation and a pro rata of $105,030, the income from the normal-school endowment fund. This interest has been included, of course, in column 3.

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TABLE 10.—*Statistics of private normal schools for 1889-90.*

	Number of schools.	Instructors.		Pupils.					Normal graduates, 1889-90.
		In professional department.	Not in professional department.	In professional department.		Not in professional department.		Model or practice school pupils included in columns 6 and 7.	
				Male.	Female.	Male.	Female.		
	1	2	3	4	5	6	7	8	9
The United States	43	274	135	4,523	3,374	1,813 (167)	1,503	667	824
South Atlantic Division	7	18	18	85	108	190	196	60	25
South Central Division	8	62	22	381	442	346	474	400	95
North Central Division	26	187	85	3,997	2,709	1,237	797	189	629
Western Division	2	7	10	60	115	40	36	18	75
South Atlantic Division:									
West Virginia	1	4	5	30	15	40	28	45	29
North Carolina	1					0	0	0	0
South Carolina	3	8	13	55	93	130	138	0	12
Georgia	1	6	0	0	0	20	30	15	8
South Central Division:									
Kentucky	1	10	0	60	40	70	82	0	75
Tennessee	1	5	9	75	80	170	230	400	10
Alabama	2	10	5	50	81	0	0	0	2
Mississippi	3	15	6	174	224	54 (70)	50	0	5
Louisiana	1	16	0	0	5	0	0	0	0
Texas	1	6	2	22	12	52	112	0	3
North Central Division:						(12)			
Ohio	6	26	44	1,229	532	992	651	30	60
Indiana	5	68	5	1,970	1,335	0	0	0	436
Illinois	3	21	8	578	564	13	21	0	28
Michigan	1	5	0	8	12	14	2	0	4
Wisconsin	2	17	0	53	17	110	54	132	13
Iowa	5	32	15	63	137	46	42	18	70
Missouri	1	2	1	8	0	62	27	9	0
Nebraska	2	16	0	88	112	(75)		0	0
Kansas	1	0	12	0	0			0	0
Western Division:									
Washington	1	4	0	10	15	40	36	18	0
California	1	3	10	50	100	0	0	0	75

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TABLE 11.—*Summary of degrees (as far as reported) conferred by professional schools in the United States at the close of the school-year 1889–90. The degrees in theology, medicine, and law, conferred by colleges and universities, Chapter 5, are duplicated in this summary.)*

	Letters.		Science.		Philosophy, in course.	Theology, in course.	Medicine in course.				Law, in course.
	In course.	Honorary.	In course.	Honorary.			M. D.	D. D. S.	Ph. G.	V. S.	
The United States	11	4	559	4	1	1,372	4,128	922	655	143	1,366
By divisions.											
North Atlantic	.....	.....	298	.....	.....	628	1,253	380	348	89	289
South Atlantic	1	1	17	.....	.....	114	498	122	69	.....	354
South Central	1	3	80	2	1	107	826	55	31	.....	163
North Central	9	.....	154	2	.....	512	1,437	338	185	54	538
Western	.....	.....	10	.....	.....	11	114	27	22	.....	22
By States.											
North Atlantic Division:											
Maine	.....	.....	42	0	.....	23	16	0	0	.....	.....
New Hampshire	.....	.....	.....	.....	.....	.....	24	0	0	.....	.....
Vermont	.....	.....	.....	.....	.....	.....	48	0	0	.....	.....
Massachusetts	.....	.....	164	0	.....	76	108	44	28	9	100
Connecticut	.....	.....	.....	.....	.....	66	10	0	0	.....	42
New York	.....	.....	.....	.....	.....	166	556	80	122	58	97
New Jersey	.....	.....	39	0	.....	107	0	0	0	0	0
Pennsylvania	.....	.....	53	.....	.....	190	491	256	198	22	50
South Atlantic Division:											
Maryland	.....	.....	6	0	.....	11	223	110	43	.....	.....
District of Columbia	.....	.....	.....	.....	.....	12	78	12	18	.....	247
Virginia	.....	.....	7	0	.....	58	20	0	0	.....	69
North Carolina	.....	.....	.....	.....	.....	2	5	0	0	.....	.....
South Carolina	1	1	2	0	.....	20	23	0	8	.....	4
Georgia	.....	.....	2	0	.....	11	140	0	0	.....	34
South Central Division:											
Kentucky	1	0	7	0	.....	35	404	12	21	.....	15
Tennessee	.....	.....	.....	.....	.....	25	310	43	.....	.....	65
Alabama	0	2	23	0	.....	24	.....	0	.....	.....	18
Mississippi	.....	.....	29	0	.....	.....	0	0	.....	.....	10
Louisiana	.....	.....	.....	.....	.....	10	93	0	10	.....	24
Texas	.....	.....	18	0	.....	13	2	0	.....	.....	30
Arkansas	3	1	3	2	1	.....	17	0	.....	.....	1
North Central Division:											
Ohio	.....	.....	8	0	.....	105	375	66	26	4	91
Indiana	.....	.....	14	0	.....	29	57	26	15	.....	23
Illinois	.....	.....	.....	.....	.....	198	357	106	43	50	20
Michigan	.....	.....	55	0	.....	6	164	42	34	0	147
Wisconsin	.....	.....	.....	.....	.....	28	.....	.....	8	.....	59
Minnesota	.....	.....	.....	.....	.....	29	25	6	1	.....	41
Iowa	9	0	32	2	.....	26	112	43	2	.....	70
Missouri	.....	.....	.....	.....	.....	82	343	49	49	.....	51
North Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota	.....	.....	16	0	.....	.....	.....	.....	.....	.....	.....
Nebraska	.....	.....	.....	.....	.....	9	4	.....	7	.....	0
Kansas	.....	.....	20	0	.....	.....	.....	.....	.....	.....	36
Western Division:											
Colorado	.....	.....	6	.....	.....	.....	18	11	4	.....	.....
Oregon	.....	.....	4	.....	.....	.....	24	.....	.....	.....	9
California	.....	.....	.....	.....	.....	11	72	16	18	.....	13

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TABLE 11.—*Statistics of schools of medicine for 1889-90.*

	Post-office.	Name of school.	Dean.	Instructors.		Students.		Graduates 1889-90.	Weeks in course.	Annual charges.	Fees.	
				Resident.	Nonresident.	Male.	Female.				Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11	12
1	Portland, Me	Portland School for Medical Instruction	W. L. Dana, M. D., secretary.	12	.....	22	.....	0	26	$60	.....	.....
2	Poughkeepsie, N. Y	Preparatory Medical School*	Walter M. Rew, M. D., medical director.	2	1	22	.....	4	68	100	.....	.....
3	Mobile, Ala	Medical College of Alabama*	George A. Ketcham, M. D.	14	.....	115	.....	36	102	75	$5	$25
4	Little Rock, Ark	Medical Department, Arkansas Industrial University	Jas. A. Dibrell, jr., M. D.	18	.....	78	.....	17	40	63	5	25
5	Los Angeles, Cal	The College of Medicine of the University of Southern California.	J. P. Widney, A. M., M. D.	23	.....	28	5	6	102	90	5	40
6	San Francisco, Cal	Cooper Medical College	Henry Gibbons, jr., A. M., M. D.	10	1	113	14	41	a60	130	5	40
7	.....do	The Medical Department of the University of California.	Robt. A. McLean, M. D.	21	.....	89	8	15	96	130	5	40
8	Boulder, Colo	Medical Department of the University of Colorado	L. M. Giffin, acting dean	7	7	20	6	4	105	.....	5	20
9	Denver, Colo	Gross Medical College of Denver	John Chase	18	.....	33	5	10	84	75	5	10
10	.....do	Medical Department of the University of Denver	J. C. Davis	21	.....	31	4	4	84	75	5	30
11	New Haven, Conn	Medical Department of Yale University	Herbert E. Smith	16	3	55	.....	10	102	125	5	30
12	Washington, D. C	The Medical Department of Georgetown University.	G. L. Magruder, M. D	25	.....	86	.....	18	96	80	5	.....
	.....do	Medical Department, Howard University	Thomas B. Hood	13	.....	93	3	27	72	60	.....	.....
13	.....do	Medical and Dental Department, National University	H. H. Barker, M. D	24	.....	36	1	13	84	b70	5	30
14	.....do	Medical Department of the Columbian University	A. F. A. King, M. D	23	.....	117	11	20	84	b67	5	.....
15	Atlanta, Ga	Atlanta Medical College	H. V. M. Miller, M. D., LL. D.	14	.....	135	.....	50	40	75	5	30
16	.....do	Southern Medical College	W. P. Nicolson	13	.....	84	.....	33	44	75	5	30
17	.....do	The Woman's Medical College of Georgia	J. W. Stone, M. D	10	2	.....	12	c1	48	80	5	20
18	Augusta, Ga	Medical College of Georgia (Medical Department of the University of Georgia).	Edw. Geddings	12	.....	124	.....	40	63	75	5	30
19	Chicago, Ill	Chicago Medical College, The College of Medicine of the Northwestern University.	Nathan Smith Davis	33	.....	237	.....	50	90	75	5	30
20	.....do	College of Physicians and Surgeons of Chicago	A. Reeves Jackson, M. D	50	5	148	.....	57	72	50	5	30
21	.....do	Rush Medical College, Medical Department of Lake Forest University.	E. L. Holmes, A. M., M. D., President.	37	2	519	.....	161	88	85	5	30
22	.....do	The Women's Hospital, Medical College of Chicago	W. H. Byford, A. M., M. D.	25	.....	.....	110	25	96	80	5	30
23	Fort, Wayne, Ind	The Fort Wayne College of Medicine	Christian B. Stemen	.....	15	30	2	7	78	55	5	25
24	Indianapolis, Ind	Central College of Physicians and Surgeons	Joseph Eastman	19	2	24	3	7	44	61	5	25
25	.....do	Medical College of Indiana	Franklin Hays, secretary.	27	2	81	.....	30	72	.....	.....	.....
26	Des Moines, Iowa	Iowa College of Physicians and Surgeons	Lewis Schooler	13	3	9	4	7	63	45	5	25
27	Iowa City, Iowa	Medical Department of the State University of Iowa.	W. F. Peck	6	7	117	7	24	75	37	5	25

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28	Keokuk, Iowa	College of Physicians and Surgeons	J. C. Hughes	16		169		63	48				
29	Louisville, Ky	Hospital College of Medicine	James Lewis Howe	16		130		54	40	75	5	30	
30	do	Kentucky School of Medicine	W. H. Wathen, M. D	18		300		100	40	75	5	30	
31	do	Louisville Medical College	Dr. J. A. Ireland	15		319		105	52	60	5	30	
32	do	Medical Department, University of Louisville	J. M. Bodine, M. D	16		329		145	72	85	5	30	
33	New Orleans, La	Medical Department, Tulane University	Prof. S. E. Chaillé, M. D	27		341	2	93	69	140	5	30	
34	New Orleans (1428 St. Charles avenue) La.	Medical Department, New Orleans University	G. W. Hubbard	1	3	11			60	25		10	
35	Brunswick, Me	Medical School of Maine, at Bowdoin College	Alfred Mitchell, M. D	2	9	81		16	60	78	5	25	
36	Baltimore, Md	The College of Physicians and Surgeons, of Baltimore.	Thomas Opie, M. D	22		329		72	44	125	5	30	
37	do	Medical Department, Baltimore University	Z. K. Wiley, M. D	15		48		27	66	50	5	30	
38	do	The Baltimore Medical College of Baltimore City	David Street, M. D	21		100		35	64	100	5	30	
39	do	University of Maryland, Faculty of Physic	J. E. Michael, A. M., M. D	12		264		82	48	120	5	30	
40	do	Women's Medical College of Baltimore	Randolph Winslow, M. D	20			20	7	84	80	5	30	
41	Boston, Mass	College of Physicians and Surgeons	Albert Nott, M. D	7	6	44	18	15	78	85	5	30	
42	do	Medical Department of Harvard University	Henry P. Bowditch, M. D	70		290		66	120	200	5	30	
43	Ann Arbor, Mich	Medical Department of the University of Michigan	C. L. Ford, M. D	19		325	47	89	144	25	10	10	
44	Detroit, Mich	The Detroit College of Medicine	T. A. McGraw, M. D	35		143		35	78	60	5	30	
45	do	Michigan College of Medicine and Surgery	J. J. Mulheson	18		72	8	18	48, 72	50	5	25	
46	Minneapolis, Minn	College of Medicine, University of Minnesota	Perry H. Millard	30		122	4	16	126	25	10	10	
47	do	Minneapolis College of Physicians and Surgeons	J. T. Moore, M. D	21	1	17	3	7	84	40	5	10	
48	Columbia, Mo	Medical Department of the University of the State of Missouri.	A. W. McAlester, A. M., M. D	6	10	18		3	120	40		5	
49	Kansas City, Mo	Kansas City Medical College	J. D. Griffith, M. D	21		56		16	48	60	5	20	
50	do	The University Medical College of Kansas City	Charles W. Adams	19	1	72		15	52, 78	60	5	20	
51	St. Joseph, Mo	Ensworth Medical College and Hospital Association.	W. I. Heddene	16	1	42	5	11	48	55	5	25	
52	do	The Northwestern Medical College	F. A. Simmons, M. D	12		42		16	40	45	5	26	
53	St. Louis, Mo	The Beaumont Hospital Medical College	W. B. Outten	16		89		22	56	80			
54	do	Missouri Medical College	P. G. Robinson	50		300		101	75	87	5		
55	do	St. Louis College of Physicians and Surgeons	A. S. Barnes	19		155		55	48	50	5	25	
56	do	St. Louis Medical College	Henry H. Mudd	40		150		22	90	100	5		
57	Omaha, Nebr	Omaha Medical College	Donald Macrae	18	3	24	2	4	48	65	5	25	
58	Hanover, N. H	Dartmouth Medical College	C. T. Frost	3	12	83		24	132	117	5	25	
59	Albany, N. Y	Medical Department, Union University	Willis G. Tucker, M. D	36	2	148		37	81	100	5	25	
60	Brooklyn, N. Y	Long Island College Hospital	A. J. C. Skene, M. D	21	1	221		55	111	100	5	25	
61	Buffalo, N. Y	Medical Department of Niagara University	A. A. Hubbell, M. D., secretary.	21	1	49	0	16	84	75	5	25	
62	do	Medical Department, University of Buffalo	M. M. Mann, A. M., M. D	27	1	187	32	52	102	100	5	25	
63	New York, N. Y	Bellevue Hospital Medical College	Austin Flint, secretary	25	0	519	0	144	d48	140	5	30	
64	do	College of Physicians and Surgeons in the City of New York, Columbia College.	Henry Deisler, LL. D., acting president.	75	0	702	0	160	102	e93	5	30	
65	do	Medical Department, University of the city of New York.	Charles Inslee Pardee	62	0	623	0	159	99	140	5	30	
66	New York (123 Second avenue), N. Y.	Woman's Medical College of the New York Infirmary.	Emiley Blackwell, M. D	27	0	0	80	20	95	80-120	5	30	
67	Syracuse, N. Y	College of Medicine of Syracuse University	Henry D. Didama, M. D., LL. D.	24	1	43	5	8	99	80	5	25	
68	Raleigh, N, C	Leonard Medical School (Shaw University)	James McKee, M. D	7	0	44	0	5	88	60	5	10	

*For 1888-89.
a In addition there is a sixteen weeks' winter course.
b Average for three years.
c Four students were also graduatedas trained nurses.
d Also a spring session of twelve weeks.
e Average.

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	Post-office.	Name of school.	Dean.	Instructors.		Students.		Graduates in 1889-'90.	Weeks in course.	Annual charges.	Fees.	
				Resident.	Nonresident.	Male.	Female.				Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11	12
69	Cincinnati, Ohio	Cincinnati College of Medicine and Surgery	R. C. Stockton Reed	16	0	74	0	27	66	40	5	25
70	....do	Medical College of Ohio	W. W. Seely, M. D.	10	0	275	0	91	66	75	5	25
71	....do	Miami Medical College of Cincinnati, Ohio	W. H. Taylor	22	0	96	0	31	66	50	5	25
72	....do	Woman's Medical College of Cincinnati	D. D. Bramble, M. D.	15	0	0	22	6	60	40	5	25
73	Cleveland, Ohio	Medical Department, Wooster University	F. J. Weed	20	1	59	3	.....	63	60, 75	5	30
74	....do	Western Reserve University, Medical Department*	H. H. Powell, M. D., registrar.	22	0	126	0	44	72	75	5	30
75	Columbus, Ohio	Columbus Medical College	D. N. Kinsman	17	2	72	0	30	88	50	5	25
76	....do	Starling Medical College	Starling Loring, M. D.	14	0	123	1	37	48	50	5	25
77	Toledo, Ohio	Northwestern Ohio Medical College	A. R. Smart	22	0	18	2	5	52	40	5	25
78	....do	Toledo Medical College	James H. Pooley, M. D.	12	3	32	4	6	104	40	5	25
79	Portland, Oregon	Medical Department, University of Oregon	S. E. Josephi	20	0	16	3	8	72	120	5	30
80	....do	Medical Department, Willamette University	E. P. Fraser	12	1	23	7	16	78	130	5	30
81	Philadelphia, Pa	The Jefferson Medical College of Philadelphia	James W. Holland	44	0	584	0	220	87	140	5	30
82	....do	Medico-Chirurgical College of Philadelphia	Peter D. Keyser, M. D.	43	0	106	0	25	88	88	5	0
83	....do	Medical Department, University of Pennsylvania	James Tyson	65	0	485	0	113	93	150	5	0
84	Philadelphia (Twenty-first street and North College avenue), Pa.	Woman's Medical College of Pennsylvania	Clara Marshall	31	0	0	181	40	93	105	5	30
85	Pittsburg, Pa	Western Pennsylvania Medical College	T. M. T. McKennan, secretary.	37	0	112	0	29	48	.....	.....	.....
86	Charleston, S. C.	Medical College of the State of South Carolina	R. A. Kinloch, M. D.	11	0	56	0	23	60	100	5	30
87	Chattanooga, Tenn.	Chattanooga Medical College (Medical Department U. S. Grant University).	E. A. Cobleigh, M. D.	23	0	34	2	5	52	85	5	25
88	Memphis, Tenn	Memphis Hospital Medical College	F. L. Sim, M. D.	10	0	196	0	63	72	75	5	30
89	Nashville, Tenn.	Medical Department of the University of Nashville and Vanderbilt University.	W. L. Nichol, registrar	12	0	278	0	128	48	75	5	25
90	....do	Medical Department University of Tennessee	Duncan Eve	17	2	245	1	99	48	75	5	25
91	....do	Meharry Medical Department of Central Tennessee College.	G. W. Hubbard, M. D.	13	0	59	0	15	60	25	0	10
92	Galveston, Tex	Texas Medical College and Hospital	Henry P. Cooke	12	0	13	0	2	88	85–155	5	20
93	Burlington, Vt	Medical Department, University of Vermont	A. P. Grinnell	9	7	206	0	48	60	75	5	25
94	Richmond, Va	Medical College of Virginia	J. S. Dorsey Cullen	19	0	60	0	10	50	90	5	30
95	University of Virginia.	Medical Department of the University of Virginia	William M. Thornton	8	0	113	0	19	78	110	35	15

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			Eclectic.										
96	San Francisco, Cal..	California Medical College*	D. Maclean	11	0	31	0	26	78	120	5	30
97	Atlanta, Ga	The Georgia College of Eclective Medicine and Surgery.	Joseph Adolphus	7	0	46	0	16	40	58	5	25
98	Chicago, Ill	The Bennett College of Eclectic Medicine and Surgery.	A. L. Clark, M. D	16	3	91	2	30	78	70	5	30
99	Indianapolis, Ind ...	The Indiana Eclectic Medical College	W. R. Adkenson	10	3	44	6	13	40	90	5	25
100	Des Moines, Iowa...	Iowa Eclectic Medical College	John Cooper	6	2	26	3	8	72	80	5	25
101	St. Louis, Mo	The American Medical College	E. Younkin	13	1	61	12	25	60	75	0	25
102	New York, N. Y	Eclectic Medical College of the City of New York	George Washington Boskowitz, M. D.	13	10	78	7	12	78	100	5	30
103	Cincinnati, Ohio	American Eclectic Medical College of Cincinnati	T. Kirby Dawson, M. D	5	6	62	0	22	120	60	5	25
104	.....do	Eclectic Medical Institute	John M. Scudder, M. D	13	1	222	19	69	120	75	0	25
		Homoeopathic.											
105	San Francisco, Cal..	Hahnemann Hospital College	George E. Davis	16	0	0	11	10	78	125	5	40
106	Chicago, Ill	Chicago Homoeopathic Medical College	Joseph Sidney Mitchell	26	0	115	0	34	66	65	5	25
107	.....do	Hahnemann Medical College and Hospital*	David S. Smith, M. D	18	2	212	0	78	63	50	5	25
108	Iowa City, Iowa.....	Homoeopathic Medical Department, State University of Iowa.	A. C. Cowperthwaite	4	2	26	8	10	78	20	5	35
109	Boston, Mass	Boston University School of Medicine	I. T. Talbot, M. D	29	7	68	38	27	102	100	5	30
110	Ann Arbor, Mich....	Homoeopathic Medical College, University of Michigan.	H. L. Obetz	4	1	52	20	21	106	25	10	10
111	Minneapolis, Minn..	The College of Homoeopathic Medicine and Surgery, Medical Department, University of Minnesota.	P. H. Millard	9	5	8	0	2	96	25	10	10
112	Kansas City, Mo	Kansas City Homoeopathic Medical College	P. Diederich, M. D	19	0	12	5	6	52	50	5	25
113	St. Louis, Mo	Homoepathic Medical College of Missouri	Scott B. Parsons, M. D	14	0	40	8	24	52	50	5	25
114	New York, N. Y.....	New York Homoeopathic Medical College and Hospital.	T. F. Allen, M. D., DL. D	29	0	129	0	38	72	100	5	30
115	.....do	The New York Medical College and Hospital for Women.	Phoebe J. B. Wait, A. M., M. D.	24	1	0	36	15	81	75	5	30
116	Cincinnati, Ohio	Pulte Medical College	J. D. Buck, M. D	15	2	61	0	16	78	50	5	30
117	Cleveland, Ohio	Homoeopathic Hospital College	J. C. Sandus, M. D	17	1	85	18	35	66	65	5	30
118	Philadelphia, Pa....	Hahnemann Medical College of Pennsylvania	A. R. Thomas, M. D	23	0	203	0	64	78	100	5	30
		Physio-medical.											
119	Indianapolis, Ind....	The Physio-Medical College of Indiana	C. T. Bedford, secretary ..	11	7	32	4	15	78	75	5	25
		Graduate.											
120	Chicago, Ill	The Chicago Ophthalmic College	H. M. Martin	1	6	59	1	45	24	0	50	0
121	.....do	The Post-Graduate Medical School of Chicago	Henry P. Newman	37	0	27	2	0	52	.....	5	0
122	Indianapolis, Ind....	Indiana Opthalmic College	John Wimmer	7	1	42	1	37	4,12	50	.....	.....
123	New Orleans, La	The New Orleans Polyclinic	J. A. Bemiss, M. D., president.	13	0	50	0	0	8	(a)	0	0
124	St. Louis, Mo.....	St. Louis Post-Graduate School of Medicine*	W. A. Hardaway, M. D	16	0	33	.....	.....	36	b50	0	0

*For 1888-89.

a About $12 for each course pursued.

b For each course or six weeks.

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TABLE 11.—*Statistics of schools of medicine for 1889-90.*—Continued.

	Post-office.	Name of school.	Dean.	Instructors.		Students.		Graduates in 1889-90.	Weeks in course.	Annual charges.	Fees.	
				Resident.	Nonresident.	Male.	Female.				Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11	12
		Graduate—Continued.										
125	New York (214-218 East Thirty-fourth street, N. Y.	New York Polyclinic Hospital and Dispensary	Willis O. Davis, superintendent.	100	0	412	0	0	52	350	0	0
126	New York, N. Y	New York Post-Graduate Medical School	D. B. St. John Roosa, M. D., LL. D.	37	0	408	7	0	52	(a)	0	0
127	Cincinnati (534 Race street), Ohio	The Cincinnati Polyclinic	Chas. A. L. Reed, M. D	21	0	10	1	0	.....	50	0	0
128	Philadelphia, Pa	Auxiliary Department of Medicine, University of Pennsylvania.	Samuel G. Dixon	5	0	20	1	1	86	35	5	10
129	do	Philadelphia Polyclinic and College for Graduates in Medicine.	S. Solis Cohen, M. D	63	.....	83	19	.....	.....	100	0	0

a Charges vary with number of tickets taken.

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TABLE 12.—*Statistics of schools of dentistry for 1889–90.*

	Post-office.	Name of school.	Dean.	Instructors.		Students.		Graduates in 1889–90.	Weeks in course.	Annual charge.	Fees.	
				Resident.	Nonresident.	Male.	Female.				Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11	12
1	San Francisco, Cal	The College of Dentistry of the University of California.	L. L. Dunbar, D. D. S	25	8	59	1	16	105	$130	$5	$30
2	Denver, Colo	Dental Department of the University of Denver	P. T. Smith	11	0	11	2	11	87	100	5	30
3	Washington, D. C	Dental Department of Columbian University	A. F. A. King, M. D	17	0	10	1	5	a60	100	5	0
4	do	Dental Department of Howard University	Thomas B. Hood, M. D	4	0	13	0	7	72	50	0	0
5	Chicago (78 State street), Ill.	American College of Dental Surgery	I. Clendenen, M. D., D. D. S.	11	9	142	7	30	120	75	5	10
6	Chicago, Ill	Chicago College of Dental Surgery	Truman W. Brophy	27	0	245	0	61	52	110	5	25
7	do	Northwest College of Dental Surgery	R. W. Clarkson, A. M., D. D. S.	13	1	10	2	5	72	100	5	0
8	Chicago (9 Jackson street), Ill.	University Dental College, Department of the Northwestern University.	John S. Marshall	37	0	26	0	10	90	90	5	30
9	Indianapolis, Ind	Indiana Dental College	J. N. Hurty, PH. D	15	8	65	3	26	40	100	5	25
10	Iowa City, Iowa	Dental Department of the State University of Iowa	A. O. Hunt, D. D. S	8	14	112	5	43	48	45	5	25
11	Louisville, Ky	Dental Department, Central University of Kentucky (Louisville College of Dentistry).	James Lewis Howe	12	1	57	0	12	66	75	5	10
12	Baltimore, Md	Baltimore College of Dental Surgery	Prof. R. B. Winder, M. D., D. D. S.	25	25	161	0	66	46	100	5	30
13	do	Dental Department, University of Maryland	F. J. S. Gorgas, M. D., D. D. S.	18	10	135	0	44	46	100	5	30
14	Boston, Mass	Boston Dental College	John A. Follett	21	0	77	3	27	120	100	5	0
15	do	Dental Department of Harvard University	Thomas H. Chandler	18	0	34	0	17	120	133	0	0
16	Ann Arbor, Mich	College of Dental Surgery of the University of Michigan.	Jonathan Taft	10	2	101	7	42	117	35	25	10
17	Minneapolis, Minn	College of Dentistry, University of Minnesota	W. X. Sudduth, secretary, M. D., D. D. S.	14	0	26	2	6	96	25	10	10
18	Kansas City, Mo	The Kansas City Dental College	C. B. Hewitt	13	6	73	0	16	48	60	5	20
19	St. Louis, Mo	Missouri Dental College	Henry A. Mudd	23	0	75	0	33	44	100	5	0
20	New York, N. Y	New York College of Dentistry	Frank Abbott	37	2	247	0	80	104	100	5	30
21	Cincinnati, Ohio	Department of Dentistry, University of Cincinnati	Henry A. Smith	10	0	160	1	63	48	75	5	25
22	Philadelphia, Pa	Pennsylvania College of Dental Surgery	C. N. Peirce	17	0	227	10	76	80	100	5	30
23	do	Philadelphia Dental College	James E. Garretson	15	0	310	9	114	120	100	5	25
24	do	Department of Dentistry, University of Pennsylvania.	James Truman	36	0	189	0	66	b62	100	5	30
25	Nashville, Tenn	Dental Department, University of Tennessee*	J. Y. Crawford, M. D., D. D. S.	4	0	(c)		21	44	50	5	10
26	do	Meharry Dental Department of Central Tennessee College.	G. W. Hubbard, M. D	7	0	7	0	2	60	25	0	10
27	do	Department of Dentistry, Vanderbilt University	W. H. Morgan, M. D., D. D. S.	7	0	101	0	41	80	75	5	25

* For 1888–89.

a With thirty-six weeks infirmary practice.

b Not including twenty-four weeks of instruction during spring and fall during the two years.

c Included in report of medical department.

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TABLE 13.—*Statistics of schools of pharmacy for 1889-90.*

	Post-office.	Name of school.	Dean.	Instructors.		Students.		Graduation, 1889-90.	Weeks in course.	Annual charge.	Fees.	
				Resident.	Nonresident.	Male.	Female.				Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11	12
1	San Francisco, Cal.	California College of Pharmacy	W. M. Searby	9	0	56	2	18	52	$63	$3	$10
2	Denver, Colo	College of Pharmacy, University of Denver	Ammi B. Hyde, A. M., D. D.	2	0	11	0	4				
3	Washington, D. C.	National College of Pharmacy	H. E. Kalusowski, secretary.	6	0	58	2	18	48	65	3	0
4	do	Pharmaceutical College of Howard University*	Rev. William Patton, D. D., LL. D., president.	1	0	16	0	13	25	50		
5	Chicago, Ill	Chicago College of Pharmacy*	George Buck	7	0	334	0	85	40	65	0	0
6	do	Illinois College of Pharmacy	Oscar Oldberg, P. D	7	0	178	5	43	40	65	0	0
7	Lafayette, Ind	Purdue School of Pharmacy	Arthur L. Green	5	0	52	0	15	48	10	5	5
8	Des Moines, Iowa	Iowa College of Pharmacy	Lewis Schooler	4	0	6	0	2	42	51	4	4
9	Iowa City, Iowa	Department of Pharmacy, State University of Iowa	Emil L. Boerner	5	1	40	1	0	48	66	5	10
10	Lawrence, Kans.	School of Pharmacy of the University of Kansas	Lucius E. Sayre	11	0	39	3	7	80	0	0	5
11	Louisville, Ky	Louisville College of Pharmacy	Fred. C. Miller, sr., recording secretary.	4	0	68	0	18	22	55, 85	5	10
12	do	Louisville School of Pharmacy for Woman	J. P. Barnum	3	0	0	23	3	126	25	5	10
13	New Orleans, La	Pharmacy course in the Medical Department, Tulane University.	Stanford E. Chaillé, M. D.	3	0	39	2	10	46	60	5	20
14	Baltimore, Md	Maryland College of Pharmacy	John W. Geiger, secretary.	3	0	120	0	43	52	60	5	15
15	Boston, Mass.	Massachusetts College of Pharmacy	C. C. Williams, secretary, PH. G., M. D.	8	0	258	5	28	68	75	5	10
16	Ann Arbor, Mich	The School of Pharmacy of the University of Michigan.	Albert B. Prescott	8	0	82	1	34	76, 114	25	10	10
17	Minneapolis, Minn.	Minnesota College of Pharmacy	J. T. Moore	4	0	2	1	1	52	40	5	10
18	Kansas City, Mo	Kansas City College of Pharmacy	E. Lanphear, M. D., PH. D., president.	6	0	37	1	7	50	40	5	20
19	St. Louis, Mo.	St. Louis College of Pharmacy	James M. Good	5	0	144	0	42	48	65	4	10
20	Albany, N. Y	The Albany College of Pharmacy	Alfred B. Hursted, secretary.	0	3	53	0	18	44	40-55	3	10
21	Buffalo, N. Y	Department of Pharmacy, University of Buffalo	Willis G. Gregory	5	0	58	1	12	44	50	3	10
22	Ithaca, N. Y	School of Pharmacy, Cornell University	W. A. Viall, secretary	11	0	5	1	2	68	125	0	5
23	New York (202-218 E. 23d st.), N. Y.	College of Pharmacy of the City of New York	Samuel W. Fairchild, president.	9	0	270	3	90	50	60	0	10
24	Cincinnati (356-360 Court st. W.), Ohio.	Cincinnati College of Pharmacy	C. T. P. Fennel	6	0	107	1	23	48	60	5	10

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25	Columbus, Ohio	The School of Pharmacy, Ohio State University	Geo. B. Kauffman	14	0	21	0	3	117	0	0	0
26	Philadelphia, Pa	Philadelphia College of Pharmacy	John W. Maisch	7	0	595	7	187	44	45–125	5	15
27	Pittsburg, Pa	Pittsburg College of Pharmacy	Fred. W. Eggers	3	0	65	0	11	40	52	4	10
28	Columbia, S. C	College of Pharmacy of the University of South Carolina.	W. B. Burney, PH. D	10	0	26	0	8	80	40	10	5
29	Nashville, Tenn	Department of Pharmacy, Vanderbilt University*	L. C. Garland, LL. D., chancelor.	9	0	28	0	6	60	25	10	5
30	Madison, Wis	Department of Pharmacy of the University of Wisconsin.	F. B. Power	4	0	34	1	8	54	0	5	0

*For 1888–89.

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TABLE 14.—*Statistics of nurse training schools for 1889-90.*

	Post-office.	Name of school.	Superintendent.	Instructors.		Students.		Graduates in 1889-90.	Weeks in course.
				Male.	Female.	Male.	Female.		
	1	2	3	4	5	6	7	8	9
1	San Francisco (3700 California st.), Cal.	San Francisco Training School for Nurses	Eugenia A. Hurd	0	1	0	36	3	104
2	New Haven, Conn	Connecticut Training School for Nurses attached to the New Haven Hospital.	Mrs. L. W. Quintard	0	8	0	67	22	78
3	Washington, D. C	The Washington Training School for Nurses	D. H. L. E. Johnson, secretary	7	0	0	24	6	72
4	Chicago, Ill	Illinois Training School for Nurses	Virginia S. Field	0	3	0	100	29	104
5	Indianapolis, Ind	The Indianapolis Flower Mission Training School for Nurses	Miss Florence Hutcheson	4	2	0	35	6	108
6	Boston, Mass	Boston City Hospital Training School for Nurses	Miss Lucy L. Drown	22	7	0	128	28	100
7	do	Boston Training School for Nurses	M. B. Brown	19	3	0	90	23	104
8	do	New England Hospital Training School for Nurses	I. C. Rose	*0	*1	0	12	11	72
9	Somerville, Mass	The McLean Asylum Training School for Nurses	Edward Cowles, M. D	6	6	27	44	28	70
10	Worcester, Mass	Worcester City Hospital Training School	Chas. A. Peabody, M. D	14	1	2	29	7	100
11	Detroit, Mich	Detroit Emergency Hospital Training School for Nurses†	Hal C. Wyman	14	0	8	0	2	104
12	do	Farrand Training School for Nurses	Mrs. L. E. Guttor	20	3	0	28	0	80
13	Grand Rapids, Mich	Union Benevolent Association Home and Hospital	Mrs. Lucy J. Chase	12	3	6	17	0	80
14	Minneapolis, Minn	Northwestern Hospital Training School for Nurses	Cora B. Roberts, M. D	0	3	0	23	8	80
15	St. Louis (1224 Dillon st.), Mo.	St. Louis Training School for Nurses	Emma L. Warr	0	1	0	29	6	100
16	Orange, N. J	Orange Training School for Nurses		0	2	0	40	16	100
17	Paterson, N. J	Paterson General Hospital and Training School for Nurses	Margaret Orr	2	1	0	12	4	48
18	Brooklyn, N. Y	Brooklyn Training School for Nurses	Miss Mary A. Camp	11	6	0	34	11	100
19	do	Long Island College Hospital Training School for Nurses	Miss Ida L. Sutliffe	0	1	0	48	22	104
20	do	Brooklyn Homœopathic Maternity and New York State School for Training Nurses.	Miss S. A. Allen	7	1	7	7	0	52
21	do	Training School for Nurses of Brooklyn Homœopathic Hospital.	Harriet C. Camp	10	2	0	53	10	104
22	Buffalo, N. Y	General Hospital Training School for Nurses.	Lois M. Masten	8	1	0	37	10	160
23	do	Training School for Nurses of the Buffalo State Hospital	Dr. Judson B. Andrews	4	0	19	23	16	48
24	New York (Sta. F), N. Y	New York Training School for Nurses (Bellevue Hospital)	Agnes S. Brennan	4	3	0	62	27	104
25	New York, N. Y	Charity Hospital, Blackwell's Island, Training School for Male and Female Nurses.	Louise Darche	a2	2	30	71	32	104
26	do	Mount Sinai Training School for Nurses	Miss A. L. Alston	5	3	0	80	26	100

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27	New York (17 W. 54 st.), N. Y.	St. Luke's Hospital Training School for Nurses	Miss Anna C. Maxwell	12	b3	0	26	6	104
28	Rochester, N. Y	Training School for Nurses of Rochester City Hospital	Susan M. Lawrence	7	4	0	35	9	104
29	Syracuse, N. Y	Syracuse Training School for Nurses	Miss Dora Traylen	0	1	0	12	6	100
30	Philadelphia, Pa	Nurse Training School of the Woman's Hospital of Philadelphia.	Anna M. Fullerton, M. D	0	2	0	70	14	100
31	do	Philadelphia Hospital Training School for Nurses	Marion E. Smith, chief nurse	0	2	0	76	45	50, 100
32	do	Philadelphia Lying in Charity and Nurse School	Emily E. Robinson	0	3	0	50	19	52
33	Pittsburg, Pa	Pittsburg Training School for Nurses	Miss M. P. Wright	0	1	0	35	11	100
34	Providence, R. I	Rhode Island Hospital Training School for Nurses	E. H. Johnson	17	1	†0	†20	6	80
35	Burlington, Vt	The Mary Fletcher Hospital Training School for Nurses	B. J. Andrews	5	0	0	17	3	80

* For 1887–88.
† From 1888–89.

a Not including visiting, house staff and chief orderlies.
b This instructor isassisted by the headnurses, and an instructor in massage.

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TABLE 15.—*Statistics of schools of veterinary medicine for 1889–90.*

	Post-office.	Name of school.	Dean.	Instructors.		Students.	Graduates in 1889-90.	Weeks in course.	Annual charge.	Fees.	
				Resident.	Nonresident.					Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11
1	Chicago, Ill	The Chicago Veterinary College	R. J. Withers, president	6	8	137	50	48	$125	$5	$10
2	Boston (50 Village street), Mass.	School of Veterinary Medicine of Harvard University.	C. P. Lyman, F. R. C. V. T	19	.....	23	9	108	100	5	30
3	Minneapolis, Minn	The Northwestern Veterinary College *a*									
4	New York (139-141 West Fifty-fourth street), N. Y.	American Veterinary College	A. Liawtard, M. D., V. M	15	.....	132	39	92	100	5	25
5	New York (332 East Twenty-seventh street), N. Y.	New York College of Veterinary Surgeons	W. T. White, president	17	.....	96	19	72	50	5	25
6	Columbus, Ohio	Ohio State University, Veterinary Department	H. J. Detmers, M. V. D., professor of vetr'y surg'y.	8	.....	11	4	117	15	.....	.....
7	Philadelphia, Pa	Veterinary Department of Pennsylvania University.	John Marshall, M. D., Nat. Sc. D.	20	.....	64	22	111	100	5	.....

a This college was totally destroyed by fire December 3, 1890.

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TABLE 16.—*Statistics of schools of theology for 1889-90.*

	Post-office.	Name of school.	Dean.	Professors.		Students.	Graduates in 1890.		Length of course in weeks.	Annual charge for tuition.	Fees.	
				Resident.	Nonresident.		Full course.	Short course			Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11	12
1	Selma, Ala	Selma University, Baptist	Rev. Charles L. Pierce, D. D.	.....	.....	25	17	0	320	$8	.....	$5–10
2	Talladega, Ala	Talladega College, Congregational	H. S. DeForest	1	0	10	0	2	102	0	0	0
3	Tuskaloosa, Ala	Institute for Training Colored Ministers, Presbyterian.	Rev. C. A. Stillman, secretary.	2	0	29	5	0	160	0	0	0
4	Oakland, Cal	The Pacific Theological Seminary, Congregational.	J. A. Benton	*a*3	14	22	5	0	108	0	0	0
5	San Francisco, Cal	Maclay College of Theology, Methodist Episcopal	Rev. R. S. Maclay, D. D	3	0	13	4	2	105	0	0	5
6	do	The San Francisco Theological Seminary, Presbyterian.	Rev. C. E. Babb, D. D., president.	2	5	14	.....	.....	99	0	0	0
7	Denver, Colo	Matthew's Hall, Protestant Episcopal	John F. Spalding, bishop of Colorado.	.....	.....	3	.....	.....	36	0	0	0
8	Hartford, Conn	The Hartford Theological Seminary, Congregational.	Rev. Chester D. Hartranft, D. D.	10	3	62	13	0	96	0	0	0
9	Middletown, Conn	Berkeley Divinity School, Protestant Episcopal (*).	Rt. Rev. John Williams, D D., LL. D.	5	1	29	12	.....	108	.....	.....	.....
10	New Haven, Conn	Theological Department of Yale University, Congregational.	George E. Day.	12	4	136	41	0	105	0	0	5
11	Washington, D. C	The Catholic University of America, Roman Catholic.	Rt. Rev. John J. Keane	8	0	47	0	0	144	0	0	0
12	do	The Theological Department of Howard University, nonsectarian.	Rev. James G. Craighead, D. D.	7	0	40	10	0	120	0	0	0
13	do	Wayland Seminary, Baptist	Rev. G. M. P. King, D. D	3	0	40	2	0	102	8	0	0
14	Atlanta, Ga	Atlanta Baptist Seminary	Rev. S. Graves, D. D	1	2	47	3	1	64	0	0	0
15	do	Gammon Theological Seminary, Methodist Episcopal.	Rev. Wilbur P. Thirkield, D. D.	4	0	76	7	0	96	0	0	0
16	Macon, Ga	Mercer University, Baptist	G. A. Nunnally, D. D	.....	0	5	.....	.....	144	0	$15	5
17	Bourbonnais Grove, Ill.	St. Viateur's College, Roman Catholic	M. J. Marsile	.....	0	26	.....	0	*b* 120	.....	.....	.....
18	Chicago (8 Ashland Boulevard), Ill.	Chicago Theological Seminary, Congregational	Rev. F. W. Fisk, D. D., LL. D.	12	0	177	16	28	90	0	0	0
19	Chicago, Ill	The McCormick Theological Seminary of the Presbyterian Church.	Member of Faculty in rotation year by year.	8	0	152	30	7	84	0	0	0
20	do	Western Theological Seminary, Protestant Episcopal.	Wm. Edward McLaren, D. D., D. C. L.	2	5	18	2	0	108	0	0	0

*For 1888-89. *a* There are also two instructors in elocution. *b* The collegiate course is of seven years, and the theological course proper is of three years.

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TABLE 16.—*Statistics of schools of theology for 1889-90*—Continued.

	Post-office.	Name of school.	Dean.	Professors.		Students.	Graduates in 1890.		Length of course in weeks.	Annual charge for tuition.	Fees.	
				Resident.	Nonresident.		Full course.	Short course.			Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11	12
21	Evanston, Ill	Garrett Biblical Institute, Methodist Episcopal	Rev. Henry B. Ridgaway, D. D.	7	0	147	.....	.....	108	.....	.....	.....
22	.....do	Nowegian-Danish Theological School, Methodist Episcopal.	N. E. Simonsen	1	0	20	3	0	102	0	0	0
23	Eureka, Ill	Eureka College, Christian	Carl Johann	13	0	69	3	0	117	0	0	0
24	Evanston, Ill	Swedish Theological Seminary, Methodist Episcopal.	Rev. Albert Ericson, A. M.	2	0	26	6	0	120	0	0	25
25	Galena, Ill	German-English College, Methodist Episcopal	Rev. Frederick Schaub, A. M.	2	0	18	0	1	114	$28\frac{1}{2}$	$30\frac{1}{2}$	2
26	Galesburg, Ill	The Ryder Divinity School, Universalist	N. White, president	4	1	11	1	0	117	0	0	5
27	Mendota, Ill	Wartburg Seminary, Lutheran*	Rev. S. Fritschel, D. D	3	0	48	17	.....	120	.....	.....	.....
28	Morgan Park, Ill	Chicago Baptist Union Theological Seminary	G. W. Northrup, president, D. D., LL. D.	11	0	142	29	4	90	0	0	0
29	Naperville, Ill	Union Biblical Institute, Evangelical Association	J. J. Esher	2	1	26	1	1	117	0	0	5
30	Rock Island, Ill	Augustana College and Theological Seminary, Evangelical Lutheran.	T. N. Hasselquist	3	0	36	16	3	96	36	5	0
31	Springfield, Ill	Concordia Seminary, Lutheran	Prof. A. Craemer	4	0	208	28	0	215	0	0	0
32	Upper Alton, Ill	School of Theology of Shurtleff College, Baptist	A. A. Kendrick	3	0	22	1	1	72	0	0	5
33	Greencastle, Ind	De Pauw School of Theology, Methodist Episcopal.	Hillary Asbury Gobin	5	1	93	10	0	120	0	12	5
34	Merom, Ind	Theological Department Union Christian College, Christian.	L. J. Aldrich	2	3	19	1	3	108	24	0	5
35	St. Meinrad, Ind	St. Meinrad's Abbey, Roman Catholic	Rt. Rev. F. Mundewiler	5	0	51	15	0	200	0	0	0
36	Beloit, Iowa	The Norwegian Augustana Theological Seminary	Prof. David Lysnes	1	0	6	2	0	108	0	0	0
37	Davenport, Iowa	Griswold College, Theological Department, Protestant Episcopal.	The Bishop of Iowa *ex officio*.	3	1	3	1	0	108	0	0	0
38	Des Moines, Iowa	Bible Department of Drake University, Christian	D. R. Dungan, A. M	3	0	75	6	0	80, 160	0	0	10
39	Dubuque, Iowa	German Presbyterian Theological School of the Northwest.	Rev. Adam McClelland, president.	3	0	32	2	1	224	0	0	0
40	.....do	Wartburg Seminary of the Evangelical Lutheran Synod of Iowa and other States.	Rev. Prof. Sigin Fritschel, D. D.	4	0	48	12	0	117	0	0	0
41	Mt. Pleasant, Iowa	German College of Mt. Pleasant, Iowa, Methodist Episcopal.	John Schlagenhauf	4	0	75	0	2	120	.....	.....	5
42	Oskaloosa, Iowa	Bible Department of Oskaloosa College, Christian	A. M. Haggard	.....	0	23	.....	0	160	30	11	10
43	Wichita, Kans	Theological Department of Garfield University, Christian.	A. L. Hoobs, A. M., LL. D., dean.	3	0	30	.....	.....	120	.....	.....	.....

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44	Danville, Ky	The Theological Seminary of the Presbyterian Church.	Stephen Yerkes, senior professor.	6	0	10	0	1	102	0	0	0
45	Lexington, Ky	College of the Bible, Christian	Robert Graham, president.	3	0	150	3	16	160	0	1	5
46	Louisville, Ky	The Southern Baptist Theological Seminary	John A. Broadus	8	0	164	15	0	105	0	0	0
47	New Orleans (1428 St. Charles ave.), La.	Gilbert Haven School of Theology, Methodist Episcopal.	L. G. Adkinson, D. D	2	1	17	0	0	64	0	0	0
48	New Orleans, La	Theological Department of Leland University, Baptist.	E. C. Mitchell	2	0	20	0	10	90	0	0	0
49	do	The Theological Department of Straight University, Congregational.	Charles H. Crawford	2	0	19	0	0	128	0	0	0
50	Bangor, Me	Bangor Theological Seminary, Congregational	Levi L. Paine, president	5	0	32	12	1	114	0	0	0
51	Lewiston, Me	Cobb Divinity School, Free Baptist	John Fullonton	5	0	16	10	0	114	0	0	0
52	Ilchester, Md	Redemptorist House of Studies, Roman Catholic	Rev. Eugene Grimm, rector.	8	0	90	10	0	276	0	0	0
53	Mt. St. Mary's, Md	Mt. St. Mary's Theological Seminary, Roman Catholic.	Very Rev. E. P. Allen, D.D.	6	0	27	------	0	160	300	0	10
54	Westminster, Md	Westminster Theological Seminary, Methodist Protestant.	Rev. J. T. Ward, D. D., F. S. SC.	6	0	27	1	0	90	55	0	5
55	Andover, Mass	Andover Theological Seminary, Congregational	Egbert C. Smyth	11	2	61	13	0	114, 142	0	0	0
56	Boston (72 Mt. Vernon street), Mass.	Boston University School of Theology, Methodist Episcopal.	W. F. Warren, S. T. D., LL. D.	12	0	136	24	0	102	0	0	10
57	Cambridge, Mass	Episcopal Theological School	William Lawrence	6	0	41	7	0	108	0	0	0
58	do	Divinity School of Harvard University, nonsectarian.	C. C. Everett	7	1	36	4	0	120	50	0	0
59	do	The New Church Theological School	Rev. F. F. Wright, secretary.	2	3	7	0	3	120	0	0	0
60	Newton Centre, Mass	The Newton Theological Institution, Baptist	Alvah Hovey, president	7	1	56	14	1	108	0	0	0
61	Tufts College, Mass.	Tufts Divinity School, Universalist	T. H. Sawyer	5	1	34	8	2	117	0	0	0
62	Adrian, Mich	School of Theology, Adrian College, Methodist Protestant.	G. B. McElroy	3	0	45	1	0	117	0	0	5
63	Hillsdale, Mich	The Theological Department of Hillsdale College, Free Baptist.	George F. Mosher	4	0	38	2	0	228	3	3	5
64	Holland, Mich	Western Theological Seminary of the Reformed (Dutch) Church in America.	N. F. Steffers, senior professor.	2	0	8	3	0	90	0	0	0
65	Faribault, Minn	The Bishop Seabury Divinity School, Protestant Episcopal.	The Rt. Rev. H. B. Whipple, D. D., LL. D.	11	0	32	6	0	120	0	0	0
66	Minneapolis, Minn	Augsburg Seminary, Lutheran	Georg Sverdrup	8	1	160	12	0	105	0	0	0
67	Parker, Minn	Luther Seminary, Lutheran	J. B. Frich, president	3	2	39	5	0	126	0	0	0
68	Red Wing, Minn	Red Wing Norwegian Evangelical Lutheran Seminary.	H. H. Bergsland	2	0	17	6	0	102	0	0	0
69	Cape Girardeau, Mo.	St. Vincent's College and Theological Seminary, Roman Catholic.*	Very Rev. F. V. Nugent, C.M	3	0	11	------	------	240	------	------	------
70	Liberty, Mo	Jeremiah Vardeman School of Theology in William Jewell College, Baptist.	Rev. W. R. Rothwell, D. D.	1	0	85	4	0	80	0	0	0
71	St. Louis, Mo	Concordia Theological Seminary, Lutheran	Francis Pieper	5	0	136	40	0	120	0	0	0
72	do	Eden College, German Evangelical	Rev. Louis Haeberle	3	0	79	24	10	111	100	0	0
73	Warrenton, Mo	Central Wesleyan College, German Methodist Episcopal.	H. A. Koch, D. D	2	0	30	3	1	120	0	8-12	5
74	Crete, Nebr	German Congregational Theological Seminary	Doede Smith	2	0	36	6	3	160	12	0	0
75	Santee Agency, Nebr	Santee Normal Training School, Congregational	Alfred L. Riggs, D. D.	2	1	23	0	0	------	0	0	0

*For 1888-89.

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TABLE 16.—*Statistics of schools of theology for 1889-90*—Continued.

	Post-office.	Name of school.	Dean.	Professors.		Students.	Graduates in 1890.		Length of course in weeks.	Annual charge for tuition.	Fees.	
				Resident.	Nonresident.		Full course.	Short course.			Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11	12
76	Bloomfield, N. J	The German Theological School of Newark, N. J., Presbyterian.	Rev. C. E. Knox, D. D	4	0	36	5	0	108	0	$5	0
77	Madison, N. J	Drew Theological Seminary of the Methodist Episcopal Church.	Henry A. Buttz	5	1	122	30	6	105	0	10	$5
78	New Brunswick, N. J	Theological School of the Reformed (Dutch) Church in America.	Rev. S. M. Woodbridge, D. D., LL.D.	5	1	38	8	2	99	0	0	0
79	Princeton, N. J	The Theological Seminary of the Presbyterian Church.	W. Henry Green, senior professor.	9	1	172	53	2	99	0	0	0
80	South Orange, N. J	Seminary of the Immaculate Conception, Roman Catholic.	Very Rev. W. P. Salt	4	0	18	1	0	160	$250	0	10
81	Allegany, N. Y	St. Bonaventure's College and Seminary, Roman Catholic.	Very Rev. J. F. Butler, O. S. F.	6	0	39	12	0	.....	0	5	10
82	Auburn, N. Y	The Auburn Theological Seminary, Presbyterian	S. M. Hopkins, D. D., senior professor.	6	0	51	17	1	105	0	0	0
83	Canton, N. Y	The Canton Theological School, Universalist	Isaac M. Atwood, president.	4	1	23	3	4	114, 152	0	0	0
84	Hamilton, N. Y	Hamilton Theological Seminary, Baptist	A. M. Beebee	7	2	56	12	2	99	0	0	0
85	Hartwick Seminary, N. Y.	The Hartwick Seminary, Lutheran	James Pitcher	4	1	13	1	3	117	0	0	0
86	New York, N. Y	The General Theological Seminary of the Protestant Episcopal Church in the United States.	Rev. E. A. Hoffman, D. D	9	2	92	27	1	160	0	0	0
87	New York (700 Park avenue), N. Y.	The Union Theological Seminary in the City of New York, Presbyterian.	Rev. T. S. Hastings, D. D. LL.D., president.	9	0	161	38	0	102	0	0	0
88	Niagara University, N. Y.	Seminary of Our Lady of Angels, Roman Catholic	Very Rev. Patrick V. Kavanagh.	6	0	34	9	0	160	0	0	0
89	Rochester, N. Y	Rochester Theological Seminary, Baptist	Rev. A. H. Strong, D. D	10	0	104	15	4	102	0	0	0
90	Stanfordville, N. Y	Christian Biblical Institute, Christian	Rev. J. B. Weston, D. D	2	3	15	1	0	102	0	0	0
91	Troy, N. Y	St. Joseph's Provincial Seminary, Roman Catholic.	Rev. H. Gabriels, D. D	7	0	136	16	0	240	.....	0	0
92	Charlotte, N. C	Theological Department of Biddle University, Presbyterian.	Rev. W. F. Johnson, D. D	3	.....	9	0	0	105	0	0	0
93	Raleigh, N. C	St. Augustine Normal School and Collegiate Institute, Protestant Episcopal.	Robt. B. Sutton, D. D	2	0	12	0	2	96	0	0	0
94	....do	Theological Department, Shaw University, Baptist.	Rev. H. M. Tupper, D. D	2	0	50	0	0	128	8	0	0
95	Trinity College, N. C.	Trinity College, Methodist Episcopal, South	John F. Crowell	3	0	25	0	0	80	0	10	5

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96	Berea, Ohio	Theological Department of German Wallace College, Methodits Episcopal.	Rev. William Nast, D. D	*2	0	30	*2	0	120			
97	Cincinnati, Ohio	Hebrew Union College	Isaac M. Wise	8	0	38	2	0	160	0	0	0
98	....do	Lane Theological Seminary, Presbyterian	J. H. Craig, PH. D	7	0	44	17	0	102	0	0	0
99	Cleveland, Ohio	St. Mary's Theological Seminary, Roman Catholic	N. A. Moss	4	0	40	8	0	252	0	0	0
100	Columbus, Ohio	Theological Seminary of the Evangelical Lutheran Synod of this and adjacent States.	M. Loy, D. D	3	0	31	5	0	120	0	0	0
101	Dayton, Ohio	Union Biblical Seminary, United Brethren	G. A. Funkhouser, senior professor.	3	1	49	10	3	96	0	0	0
102	Gambier, Ohio	Theological Seminary of the Protestant Episcopal Church in the Diocese of Ohio.	Rt. Rev. W. A. Leonard, D. D.	3	2	(a)			114	0	0	
103	Oberlin, Ohio	The Theological Department of Oberlin College, Congregational.		9	2	106	16	8	102	0	0	5
104	Springfield, Ohio	Theological Department of Wittenburg College, Evangelical Lutheran.		3	0	23						
105	Tiffin, Ohio	Heidelberg Theological Seminary, Reformed	Rev. David Van Horne, D. D.	3	0	11	5	0	90	0	0	0
106	Wilberforce, Ohio	Theological Department, Wilberforce University, African Methodist Episcopal.	S. T. Mitchell	4	0	18	1	0	26, 39	0	0	5
107	Xenia, Ohio	The United Presbyterian Theological Seminary of Xenia, Ohio.	James Harper, president	4	6	28	9	19	90	0	0	0
108	Allegheny, Pa	The Allegheny Theological Seminary, United Presbyterian.	Rev. A. Young, D. D., LL. D	5	0	57	16	0	99	0	0	0
109	....do	Reformed Presbyterian Theological Seminary		3	0	24	4	0	104	0	0	0
110	....do	Western Theological Seminary, Presbyterian	William H. Jeffers	6	0	79	22	0	99	0	0	0
111	Beatty, Pa	Theological Department, St. Vincent Seminary, Roman Catholic.	Rt. Rev. Andrew Hintenack.	8	0	75	20	0	200		0	0
112	Bethlehem, Pa	The Moravian College and Theological Seminary	A. Schultze	4	0	27	7	2	240	0	0	0
113	Collegeville, Pa	Theological Department, Ursinus College, Reformed.	Rev. J. H. A. Bomberger, D. D., LL. D.	4	3	8	4	0	108	0	0	0
114	Germantown, Pa	St. Vincent's Seminary, Roman Catholic	James McGill	6	2	54	0	0	280	0	0	0
115	Gettysburg, Pa	The Theological Seminary of the General Synod of the Evangelical Lutheran Church in the United States.	M. Valentine, D. D., LL. D	4	1	56	14	5	111	0	0	0
116	Lancaster, Pa	Theological Seminary of the Reformed Church*	Eml. V. Gerhart	3	1	42	14	2	108	0	0	0
117	Meadville, Pa	The Meadville Theological School, Unitarian	Abiel Abbott Livermore	5	2	35	9	1	114	20	0	0
118	Overbrook, Pa	Seminary of St. Charles Borromeo, Roman Catholic.	V. Rev. J. E. Fitz Maurice, president.	11	1	146	17	20	440	0	0	0
119	Mt. Airy, Philadelphia, Pa.	Theological Seminary of the Evangelical Lutheran Church at Philadelphia.	Rev. C. W. Schaeffer, D. D. LL. D.	4	0	70	15	0	99	0	0	0
120	Philadelphia, Pa	St. Vincent's Seminary, Roman Catholic	James McGill	5								
121	Selins Grove, Pa	The Missionary Institute of the Evangelical Lutheran Church.	P. Born, superintendent	2	0	11	4	0	117	0	0	5
122	Upland, Pa	The Crozer Theological Seminary, Baptist	Henry G. Weston	7	1	72	14	0	111	0	0	0
123	Villanova, Pa	Ecclesiastical Department, Villanova Monastery, Roman Catholic.	T. C. Middleton, D. D., O. S. A., prefect.	3	0	20	0	0	210	0	0	0
124	Columbia, S. C	Theological Department, Benedict College, Baptist.	C. E. Becker	1	0	43			72	0	0	0
125	....do	Theological Department of Allen University, Methodist Episcopal.*	Jos. W. Morris, A. M., LL. B.	3	0	9						
126	....do	The Theological Seminary of the Synod of South Carolina and Georgia, Presbyterian.	Rev. J. D. Tadlock, chairman.	5	0	25	13	0	96	0	0	0

*For 1888-89.

a Practically closed during year 1889-90.

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TABLE 16.— *Statistics of schools of theology for 1889-90*—Continued.

	Post-office.	Name of school.	Dean.	Professors.		Students.	Graduates in 1890.		Length of course in weeks.	Annual charge for tuition.	Fees.	
				Resident.	Nonresident.		Full course.	Short course.			Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11	12
127	Due West, S. C	Erskine Theological Seminary, Associate Reformed Presbyterian.	W. L. Pressly	3	0	7	3	4	72	0	0	0
128	Newberry, S. C	Evangelical Lutheran Theological Seminary	G. W. Holland, PH. D., D. D	3	0	4	0	0	90	0	0	0
129	Orangeburg, S. C	Baker Theological Institute, Methodist Episcopal	L. M. Dunton, D. D	3	0	16	0	0	64	0	0	0
130	Athens, Tenn	School of Theology of U. S. Grant University, Methodist Episcopal.	Geo. S. Newcomb	3	0	29	1	0	93	0	0	0
131	Lebanon, Tenn	Theological School of Cumberland University, Cumberland Presbyterian.	N. Green, chancellor	3	3	36	10	0	80	0	$10	$5
132	Nashville, Tenn	Theological Department of Central Tennessee College, Methodist Episcopal.	R. W. Keeler	2	3	27	0	0	72	0	0	2
133	....do	Theological Course, Fisk University, Congregational	Rev. E. M. Cravath, D. D	2	0	14	.....	.....	.....	.....	.....	.....
134	....do	Theological Department of Roger, Williams University, Baptist.	A. Owen, D. D	1	0	32	.....	.....	.....	.....	.....	.....
135	....do	Biblical Department of Vanderbilt University, Methodist Episcopal, South.	Rev. Wilbur F. Tillett, D. D.	6	0	54	4	1	103	0	10	5
136	Sewanee, Tenn	Theological Department of the University of the South. Protestant Episcopal.	Telfair Hodgson	5	3	21	3	0	120	0	0	0
137	Tehuacana, Tex	Theological Department of Trinity University, Cumberland Presbyterian.	B. D. Cockrill	4	0	28	0	13	36, 100	0	3	5
138	Hampden Sidney, Va	Union Theological Seminary, Presbyterian *	Thos. E. Peck, D. D., L. L. D	5	0	67	43	.....	108	.....	.....	.....
139	Richmond, Va	The Richmond Theological Seminary, Baptist	Rev. C. H. Corey, A. M., D. D	4	0	64	5	0	105	$3	0	5
140	Theological Seminary, Va.	Protestant Episcopal Theological Seminary of Virginia.	Joseph Packard	5	0	59	10	0	120	0	0	0
141	Franklin, Wis	Mission House of the Reformed Church in the United States.	Rev. H. A. Muehlmeier, D. D	3	0	28	9	0	120	25	0	0
142	Milwaukee (621 13th street), Wis.	Evangelical Luthern Theological Seminary of the Evangelical Luthern Synod of Wisconsin.	E. A. Notz, inspector	3	0	28	10	0	114	0	0	0
143	Nashotah, Wis	Nashotah House, Protestant Episcopal	George C. Carter, president, S. T. D.	4	3	22	7	2	114	0	0	0
144	Prairie du Chein, Wis	Sacred Heart College, Roman Catholic	Edward F. Staffew, S. J	4	0	23	0	0	176	0	0	0
145	St. Francis, Wis	Provincial Seminary of St. Francis of Sales, Roman Catholic.	Very Rev. Joseph Rainer	5	0	110	.....	0	205	.....	0	0

* For 1888-89.

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TABLE 17.—*Statistics of schools of law for 1889-90.*

	Post-office address.	Name of school.	Dean.	Professors.		Students.	Graduates in 1890.	Length of course in weeks.	Annual charge for tuition.	Fees.	
				Resident.	Nonresident.					Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11
1	University of Alabama, Ala.	Law school of the University of Alabama	H. E. Reynolds	3	0	21	18	72	$50	0	$3
2	Little Rock, Ark	Little Rock Law Class, under supervision of the Little Rock University.	Francis M. Fulk, president.	3	0	20	1	24	0	$5	0
3	San Francisco, Cal	Hastings College of the Law (Law Department, University of California).	Robert P. Hastings	4	0	76	13	108	a10	0	0
4	New Haven, Conn	Law Department, Yale University	Francis Wayland	13	10	111	42	66	100	0	5
5	Washington, D. C	The Law School of the Columbian University	James C. Welling, LL. D., president.	8	0	210	78	108	75	0	2
6	....do	The Law Department of Howard University	Benjamin F. Leighton, LL. D.	5	0	30	8	66, 99	35	5	5
7	....do	Law Department of Georgetown University	Martin F. Morris, LL. D	9	0	217	106	105	90	0	5
8	....do	Law School of the National University	Hon. Samuel F. Miller, chancellor.	9	1	125	55	96	80	0	0
9	Athens, Ga	Law Department, University of Georgia	Andrew J. Cobb, secretary	4	5	35	34	36	75	0	6
10	Macon, Ga	Law School of Mercer University	C. P. Steed, secretary	3	0	4	0	36	75	0	5
11	Oxford, Ga	Law Department of Emory College	Hon. Emory Speer, LL. B	3	0	0	.....	32	50	5	10
12	Bloomington, Ill	Bloomington Law School, Law Department of Illinois Wesleyan University.	Reuben M. Benjamin	7	0	41	20	72	60	0	5
13	Chicago, Ill	Union College of Law of Northwestern University*	Hon. Henry Booth, LL. D., dean.	5	0	137	.....	72	80	.....	10
14	Lebanon, Ill	Law Department of McKendree College	Rev. I. Villars, DD	1	0	11	.....	72	37	.....	.....
15	Quincy, Ill	Chaddock School of Law	J. A. McMurray	5	0	4	0	80	50	20	5
16	Bloomington, Ind	Law Department of the Indiana University	D. D. Banta	3	0	37	1	74	38	13	5
17	Greencastle, Ind	School of Law, De Pauw University	Alexander C. Douney	4	0	30	15	52	40	10	5
18	Notre Dame, Ind	Law Department, University of Notre Dame	William Hoynes	3	4	39	7	126	(b)	5	10
19	Des Moines, Iowa	Iowa College of Law, Law Department of Drake University.	Andrew J. Baker	11	1	20	7	74	50	0	5
20	Iowa City, Iowa	Law Department of the State University of Iowa	Emlin McClain, chancellor.	4	4	135	63	78	50	0	7
21	Lawrence, Kans	Law School, University of Kansas	James W. Green	3	1	64	29	76	0	0	5
22	Wichita, Kans	Law College of Garfield University	Richard A. Haste	3	7	20	7	80	40	10	5
23	Louisville, Ky	Louisville Law School, Law Department of University of Louisville.	W. O. Harris	3	0	30	15	56	80	0	0
24	New Orleans, La	The Tulane University, Law Department	Henry C. Miller	5	0	49	24	24	80	0	0
25	Baltimore, Md	School of Law of the University of Maryland*	S. T. Wallis, LL. D	7	0	108	33	108	80	4	10

*For 1888-89.

a For incidental expenses.

b Including boarding, lodging, books, washing, mending, etc., $300.

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TABLE 17.—*Statistics of schools of law for 1889-90*—Continued.

	Post-office address.	Name of school.	Dean.	Professors.		Students.	Graduates in 1890.	Length of course in weeks.	Annual charge for tuition.	Fees.	
				Resident.	Nonresident.					Matriculation.	Graduation.
	1	2	3	4	5	6	7	8	9	10	11
26	Boston, Mass	Boston University Law School	Edmund H. Bennett	19	4 0	180	52	102	$100	0	$10
27	Cambridge, Mass	Law School of Harvard University*	C.C. Langdell, LL. D., dean	8		265	48	108	150		
28	Ann Arbor, Mich	The Law Department of the University of Michigan	Henry Wade Rogus	3	3	405	147	72	25	$10	10
29	Minneapolis, Minn	The Minnesota Law School	William S. Pattee	17	0	134	41	72	30	10	10
30	University, Miss	Department of Law, University of Mississippi	None	3	2	15	10	80	50	0	0
31	Columbia, Mo	Law Department of the University of the State of Missouri	Alexander Martin	6	4	69	26	70	40	10	5
32	St. Louis, Mo	St. Louis Law School, Washington University	William Gardner Hammond, LL. D.	8	0	78	25	66	80	0	0
33	Lincoln, Nebr	Central Law College	W. Henry Smith	4	3	32	0	62, 124	30	5	5
34	Albany, N. Y	Albany Law School (Union University)*	William L. Learned	9	0	43	25	76	150	0	10
35	Buffalo, N. Y	The Buffalo Law School	Charles Daniels	13	1	26	6	68	100	0	0
36	Ithaca, N. Y	The Cornell University School of Law	Douglas Boardman	6	7	106	39	68, 102	125	0	5
37	New York (41 E. 49th st.) N. Y.	School of Law, Columbia College	Theodore W. Dwight, warden, LL. D.	9	0	456	0	98	150	5	25
38	New York, N. Y	University of the City of New York, Department of Law	David R. Jaques, LL. D	2	6	142	52	70	100	0	10
39	Chapel Hill, N. C	The University Law School	John Manning, LL. D	2	0	35		40, 80	90	10	0
40	Cincinnati, Ohio	The Law School of the Cincinnati College	Jacob D. Cox	6	0	166	91	66	75	0	5
41	Portland, Oregon	The School of Law of the University of Oregon	Richard H. Thornton, LL. B.	4	0	33	9	60	60	0	10
42	Salem, Oregon	Willamette University	Thos. Vanscoy	4	0	6	0	80	50	0	5
43	Philadelphia, Pa	Law Department, University of Pennsylvania	Wm Pepper, M. D., LL. D.	5	0	176	50	108	100	5	0
44	Columbia, S. C	The Law School of Allen University	Thos. A. Saxon	1	0	10	4	64	35	20	10
45	do	School of Law of University of South Carolina	John D. Pope, A. M	1	0	18		72	40		5
46	Lebanon, Tenn	Law School of Cumberland University	N. Green, chancellor	2	0	66	33	40	100	5	5
47	Nashville, Tenn	Law Department of the Central Tennessee College	Edgar L. Gregory	3	0	8	3	72	30	0	10
48	do	Law Department of Vanderbilt University	Thomas H. Malone	3	0	50	29	80	100	0	5
49	Knoxville, Tenn	Law Department of University of Tennessee	Thos. J. Freeman	1	0	14	0	72	100	6	0
50	Austin, Tex	Law Department of the University of Texas	No dean	2	0	79	30	72	0	20	0
51	Lexington, Va	Law Department of the Washington and Lee University	John Randolph, Tucker	2	0	57	19	72	75	0	0
52	University of Virginia, Virginia.	Law Department of University of Virginia	J. B. Miner, senior professor.	2	0	151	50	74	80	25	15
53	Morgantown, W. Va.	Law Department of West Virginia University	E. M. Turner, LL. D	2	0	10		36	20		
54	Madison, Wis	The College of Law of the University of Wisconsin	Edwin E. Bryant	6	5	114	59	76	0	100	0

* For 1888-89

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TABLE 18.—*Statistics of schools of science endowed with the national land grant, for 1889–90.*

	Post-office.	Name of school.	President.	Preparatory.				College—				Fees.			Income from—	
				Instructors.		Pupils.		Instructors.		Pupils.						
				Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Matriculation.	Graduation.	Annual charge.	State.	Productive funds.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Auburn, Ala	Alabama Polytechnic College	Wm. LeRoy Brown	2	0	43	0	16	0	204	0	$5	----	0	$16,556	$20,280
2	Fayetteville, Ark	Arkansas Industrial University	E. H. Murfee, A. M., LL. D.	10	3	355	130	13	1	86	21	5	0	0	----------	----------
3	Fort Collins, Colo	The State Agricultural College	C. L. Ingersoll, M. S.	0	0	12	1	12	1	44	17	5	$10	0	38,000	1,300
4	New Haven, Conn	Sheffield Scientific School of Yale University.	G. J. Brush, LL. D., director	0	0	0	0	31	----	284	0	----	10	$150	----------	----------
5	Newark, Del	Delaware College	A. N. Raub, PH. D	0	0	0	0	8	0	82	0	5	5	60	0	4,980
6	Lake City, Fla	The Florida Agricultural College	F. L. Kern	0	0	78	0	8	0	85	0	5	0	0	10,800	9,000
7	Cuthbert, Ga	Southwest Georgia Agricultural College.*	A. J. Clark	2	0	124	0	2	----	33	0	----	----	------	2,000	----------
8	Dahlonega, Ga	The North Georgia Agricultural College.	Wm. S. Basinger	3	1	54	21	5	0	81	12	10	0	0	5,000	500
9	Hamilton, Ga	West Georgia Agricultural and Mechanical College.*	Henry A. Hayes, A. B	2	----	32	24	2	0	33	28	1½	5	0	----------	----------
10	Milledgeville, Ga	Middle Georgia Military and Agricultural College.	Maj. J. C. Lynes	0	5	94	143	5	2	123	58	----	0	0	2,000	1,007
11	Thomasville, Ga	The South Georgia College of Agriculture and Mechanic Arts.	C. W. Hutson	0	2	61	31	2	1	30	28	5	0	0	2,000	0
12	Champaign, Ill	The University of Illinois	S. H. Peabody, PH. D., LL. D.	4	1	93	20	30	1	296	54	10	5	0	46,044	24,606
13	La Fayette, Ind	Purdeu University	James H. Smart	6	2	75	40	27	5	259	55	5	5	0	75,000	17,000
14	Ames, Iowa	Iowa Agricultural College and Farm	E. W. Stantero, acting president.	4	2	14	17	18	5	126	69	0	5	0	0	42,000
15	Manhattan, Ind	Kansas State Agricultural College	Geo. T. Fairchild	0	0	0	0	20	5	323	181	0	0	0	8,900	34,546
16	Lexington, Ky	Agricultural and Mechanical College of Kentucky.	J. R. Patterson, PH. D., F. R. H. S.	4	1	146	23	13	0	240	123	5	0	15	24,000	9,900
17	Orono, Me	Maine State College of Agriculture and the Mechanic Arts.	M. C. Fernald, PH. D	0	0	0	0	12	0	130	1	0	3	30	10,000	10,000
18	Agricultural College, Md.	The Maryland Agricultural College	H. E. Alvord, C. E	0	0	0	0	7	0	45	0	0	0	0	6,000	6,170
19	Amherst, Mass	Massachusetts Agricultural College	Henry H. Goodell	0	0	0	0	12	0	135	0	0	5	0	20,000	11,036
20	Boston, Mass	Massachusetts Institute of Technology	Francis A. Walker	0	0	0	0	89	1	873	33	0	0	250	4,960	23,078
21	Agricultural College, Michigan.	The State Agricultural College	O. Clute	0	0	0	0	24	0	365	13	5	5	0	20,973	46,322

*For 1888–89.

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TABLE 18.—*Statistics of schools of science endowed with the national land grant, for 1889–90*—Continued.

	Post-office	Name of school.	President.	Preparatory. Instructors. Male.	Preparatory. Instructors. Female.	Preparatory. Pupils. Male.	Preparatory. Pupils. Female.	College— Instructors. Male.	College— Instructors. Female.	College— Pupils. Male.	College— Pupils. Female.	Fees. Matriculation.	Fees. Graduation.	Fees. Annual charge.	Income from— State.	Income from— Productive funds.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
22	Agricultural College, Mississippi.	Agricultural and Mechanical College of Mississippi.	Gen. S. D. Lee	4	0	140	0	12	0	100	0	$5	0	0	$22,571	$4,929
23	Rodney, Miss	Alcorn Agricultural and Mechanical College.	J. H. Burrus, M. A	0	0	204	0	7	0	37	1	0	0	0	4,821	5,679
24	Rolla, Mo	Missouri State School of Mines and Metallurgy.	W. H. Echols, director	2	0	0	0	4	0	a52	a17	15	0	0	7,500	8,890
25	Hanover, N. H	New Hampshire College of Agriculture and the Mechanic Arts.	Lyman D. Stevens	0	0	0	0	11	0	31	0	0	$2	0	3,000	7,000
26	New Brunswick, N. J.	Rutgers Scientific School	Austin Scott, PH. D	5	4	.....	0	20	0	80	0	5	8	$75	.....	.....
27	Las Cruces, N. Mex.	Agricultural College and Agricultural Experimant Station.	Hiram Hadley	1	1	30	20	4	0	18	3	3	0	3	10,000	0
28	Ithaca, N. Y	The Cornell University	Charles Kendall Adams	0	0	0	0	100	0	608	.....	0	5	75	0	265,154
29	Raleigh, N. C	The North Carolina College of Agriculture and Mechanic Arts.	A. Q. Holladay	0	0	0	0	7	0	72	0	0	5	0	20,000	7,500
30	Corvallis, Oregon	Oregon State Agricultural College	B. L. Arnold	2	0	42	19	9	1	53	61	0	0	15	7,500	10,000
31	State College, Pa	Pennsylvania State College*	Geo. W. Atherton, LL. D	4	0	21	66	17	0	99	10	0	0	0	b59,750	31,029
32	Orangeburg, S. C	Claflin University, College of Agriculture and Mechanics Institute.	L. M. Dunton, A. M., D. D	3	0	100	51	4	0	15	1	0	2–5	3	10,800	0
33	College Station, Tex.	State Agricultural and Mechanical College of Texas.	L. L. McInnis, chairman of faculty.	0	0	0	0	20	0	272	0	10	5	0	20,000	14,280
34	Logan, Utah	The Agricultural College of Utah	J. W. Sanborn, B. S	1	0	37	13	5	1	20	19	5	0	5	c34,000	0
35	Blacksburg, Va	Virginia Agricultural and Mechanical College.	L. L. Lomax	1	0	12	0	11	0	127	0	0	0	0	3,750	20,650
36	Hampton, Va	The Hampton Normal and Agricultural Institute.		12	30	433	250	.....	.....	.....	.....	.....	.....	.....	10,329	10,495

*For 1888–89.
*a*Reported as entire number in the school.
*b*For buildings.
*c*This was for building and equipment.

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TABLE 19.—*Statistics of schools of science not endowed with the national land grant, for 1889–90.*

	Post-office	Name of school.	President.	Preparatory. Instructors. Male.	Preparatory. Instructors. Female.	Preparatory. Pupils. Male.	Preparatory. Pupils. Female.	College— Instructors. Male.	College— Instructors. Female.	College— Pupils. Male.	College— Pupils. Female.	Fees. Matriculation.	Fees. Graduation.	Fees. Annual charge.	Income from— State.	Income from— Productive funds.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Ontario, Cal	Chaffey College of Agriculture	W. T. Randall	5	2	22	46	0	0	0	0	0	0	$30	0	$8,000
2	San Francisco, Cal	Cogswell Polytechnic College	Jas. G. Kennedy	7	3	113	13	0	0	0	0	0	0	0	0	20,000
3	Golden, Colo	State School of Mines	Regis Chauvenet	0	0	0	0	7	0	54	0	0	0	0	$33,000	0
4	Storrs, Conn	Storrs Agricultural School	B. F. Koons	0	0	0	0	4	1	41	0	0	0	25	58,000	0
5	Washington, D. C	The Corcoran Scientific School	J. C. Welling, LL. D	0	0	0	0	16	0	107	6	0	0	90	0	0
6	Atlanta, Ga	Georgia School of Technology	I. S. Hopkins	0	0	0	0	14	0	108	0				18,000	
7	Terre Haute, Ind	Rose Polytechnic Institute	C. A. Waldo, acting president.	0	0	0	0	10	0	158	0	84	0	100	0	24,000
8	Cambridge, Mass	Lawrence Scientific School	Chas. W. Eliot	0	0	0	0	29	0	65	0	0	0	150	0	9,000
9	Jamaica Plain, Mass	The Bussey Institution	Charles W. Eliot	0	0	0	0	5	0	3	0	0	0	150	0	
10	Worcester, Mass	Worcester Polytechnic Institute	Homer T. Fuller	0	0	0	0	21	0	168	0	0	0	150	0	26,500
11	Houghton, Mich	Michigan Mining School		0	0	0	0	9	0	49	0	0	0	0	52,000	0
12	St. Louis, Mo	Polytechnic School of Washington University.	C. M. Woodward, dean	0	0	0	0	21	0	71	0	5	0	150	0	
13	Deer Lodge, Mont	School of Mines, College of Montana	Rev. Jas. Reid	0	0	37	29	9	5	12	10	0	0	150	0	0
14	Hanover, N. H	Chandler School of Science and the Arts	S. C. Bartlett	0	0	0	0	15	0	64	0	0	35	60	0	
15	....do	Thayer School of Civil Engineering	Rev. S. C. Bartlett, D. D., LL. D.	0	0	0	0	2	0	10	0	0	0	60	0	
16	Hoboken, N. J	Stevens Institute of Technology	Henry Morton		(a)			18	0	204	0	0	0	150	0	24,000
17	Princeton, N. J	John C. Green School of Science	F. L. Patton, D. D	0	0	0	0	30	0	110	0					
18	New York, N. Y	School of Mines of Columbia College*	Henry Drisler, LL. D., acting president.	0	0	0	0	39	0	257	0	5				
19	Troy, N. Y	Rensselaer Polytechnic Institute	J. Hudson Peck, A. M., LL. D.	0	0	0	0	17	0	161	0	18		200		
20	Cleveland, Ohio	Case School of Applied Science	Cady Staley	0	0	0	0	11	0	80	0	0	0	100	0	50,000
21	Philadelphia, Pa	The Towne Scientific School of the University of Pennsylvania	William Pepper, M. D., LL. D.	0	0	0	0	67	0	443	36	0	2	180		
22	South Bethlehem, Pa	The Lehigh University	R. A. Lamberton, LL. D	0	0	0	0	33	0	427	0	0	0	0	0	
23	Brookings, S. Dak	The Agricultural College of South Dakota.	Lewis M. Louth			62	35	16	3	174	43	0	0	3	26,088	0
24	Rapid City, S. Dak	State School of Mines	S. Cushman	0	0	0	0	4	0	9	7	0	0	0		0
25	Northfield, Vt	Norwich University*	Col. C. H. Lewis, LL. D			6	0	8	0	48	0		10	45	1,500	0
26	Lexington, Va	Virginia Military Institute	Gen. Scott Shipp	0	0	0	0	13	0	201	0	0	10	75	0	1,200
27	New Market, Va	New Market Polytechnic Institute*	W. H. Smith, A. M	1	0	37	0	2		18	0	3	5	140	2,000	0

*For 1888–89.

a For statistics of this department see under Stevens School in the table of secondary institutions.

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TABLE 20.—*Statistics of public normal schools for 1889-90.*

	Post-office address.	Name of school.	Principal or superintendent.	Instructors in the professional course.	Students.				Full professional course in weeks.	Annual charge to normal students.	Graduates from Normal course, 1889-90.
					Normal, *i. e.*, professional.		Other, *i.e.*, nonprofessional.				
					Male.	Female.	Male.	Female.			
	1	2	3	4	5	6	7	8	9	10	11
1	Birmingham, Ala	Birmingham Normal Training School	Mrs. Mary W. Rode (for 1890-91, Mrs. E. N. Allen).	1	0	12	0	0	36	0	9
2	Florence, Ala	State Normal College	James K. Powers	8	95	77	108	56	36-144	0	20
3	Huntsville, Ala	State Normal and Industrial School	W. C. Councill	5	40	49	60	99	114	0	13
4	Jacksonville, Ala	State Normal School	C. B. Gibson	4	17	28	60	75	120	$5	7
5	Livingston, Ala	Alabama Normal College for Girls	J. W. A. Wright	9	0	43	0	80	144	5	17
6	Troy, Ala	Troy State Normal College	E. R. Eldridge	2	68	82	65	81	111-185	0	15
7	Tuskegee, Ala	Tuskegee Normal and Industrial Institute	B. T. Washington	15	127	101	128	91	156	0	16
8	Tempe, Ariz	Arizona Territorial Normal School	Robert L. Long	1	12	18	2	1	80	0	2
9	Pine Bluff, Ark	Branch Normal College of Arkansas Industrial University.	J. C. Corbin	4	100	76	0	0	80	0	.....
10	Chico, Cal	State Normal School	Edw. T. Pierce	6	93	19	0	0	120	0	0
11	Los Angeles, Cal	California State Normal School	Ira More	13	48	240	93	107	120	0	50
12	San Jose, Cal	State Normal School	Charles W. Childs	26	50	500	80	190	120	0	157
13	New Britain, Conn	State Normal and Training School	Clarence F. Carroll	19	2	370	0	0	80	0	77
14	New Haven, Conn	Welch Training School	M. Virginia Fogle	6	0	35	0	0	40	0	30
15	Washington, D. C	Miner's Normal	Miss Lucy E. Moten	5	6	34	0	0	40	0	40
16	De Funiak Springs, Fla.	State Normal School	H. N. Felkel	4	2	2	0	0	72	0	(*a*)
17	Tallahassee, Fla	Florida State Normal School for Colored Teachers	T. De S. Tucker	3	7	3	29	36	72	0	0
18	Fairburn, Ga	Fairburn High School *	Robert L. Paine	3	75	40	50	65	.....	10	.....
19	Carbondale, Ill	Southern Illinois Normal University	Robert Allyn	15	231	183	175	147	117-156	0	11
20	Englewood, Ill	Cook County Normal School	Francis W. Parker	.....	*3	*130	0	0	40	75	82
21	Normal, Ill	Illinois State Normal University	John W. Cook	15	224	453	226	205	117	0	36
22	Covington, Ind	Indiana Normal College	W. R. Humphrey	4	25	11	22	24	96	33	4
23	Indianapolis, Ind	Indianapolis Normal School	M. E. Nicholson	9	0	27	0	0	57	0	27
24	Terre Haute, Ind	Indiana State Normal School	William W. Parsons	20	316	507	0	0	39-156	0	41
25	Cedar Falls, Iowa	Iowa State Normal School	Homer A. Seerley	12	217	440	0	0	72-144	0	61
26	Sioux City, Iowa	Sioux City Training School for Teachers*	Mrs. Eva D. Kellogg	6	.....	.....	.....	.....	.....	.....	.....
27	Storm Lake, Iowa	Storm Lake Normal and Business School*	L. Greenwood and C. Whiting	3	22	30	5	5	120	32	.....
28	Woodbine, Iowa	Woodbine Normal School	W. O. Riddell, C. C. Matter, H. A. Kinney.	3	25	150	110	95	80	28	9
29	Epmoria, Kan	Kansas State Normal School	A. R. Taylor	15	302	546	80	132	120-160	0	53

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30	Louisville, Ky	The Louisville Normal School	Hiram Roberts	6	0	36	100	100	42	0	36
31	Natchitoches, La	Louisiana State Normal School	Thomas D. Boyd	9	12	72	64	83	102	0	8
32	New Orleans, La	New Orleans Normal School †	Mary Stamps	6	0	110					
33	Castine, Me	Eastern State Normal School	A. F. Richardson	6	100	200	0	0	76	0	29
34	Farmington, Me	State Normal School	George C. Purington	8	41	172	0	0	76-114	0	42
35	Gorham, Me	Western State Normal School	W. J. Corthell	7	16	92	30	45	80	0	39
36	Portland, Me	Portland Normal Practice School	Sarah M. Taylor	1	0	10	96	52	78	0	7
37	Baltimore, Md	Maryland State Normal School	E. B. Prettyman	10	24	280	3	11	120	50	68
38	Boston, Mass	Boston Normal School	Larkin Demton	7	0	198	0	0	60		79
39	do	Massachusetts Normal Art School *	G. H. Bartlett	9	35	159	0	0	74		
40	Bridgewater, Mass	State Normal School	Albert G. Boyden	14	75	181			80-160	0	75
41	Fall River, Mass	Training School for Teachers	Ariadne J. Borden	2	0	18	0	0	60	0	12
42	Framingham, Mass	State Normal School	Ellen Hyde	16	0	150	0	100	80-160	0	54
43	Haverhill, Mass	Training School	Cora A. Newton	2	0	12	0	0	60	0	9
44	Lawrence, Mass	Lawrence Training School	Lilly P. Shepard	2	0	18	156	144	60	0	10
45	Salem, Mass	State Normal School	Daniel B. Hagar	13	0	292	0	0	76-142	0	69
46	Springfield, Mass	Bay State Normal Training School	Miss E. M. Reed	1	0	16			40	0	16
47	Westfield, Mass	State Normal School	James C. Greenough	8	6	136	0	0	76-152	0	25
48	Worcester, Mass	do	E. H. Russell	9	6	190	0	0	76	0	44
49	Ypsilanti, Mich	Michigan State Normal School	John M. B. Sill	29	275	536	0	0	120-240	0	116
50	Mankato, Minn	State Normal School	Edw. Searing	18	99	196	5	5	108-144	0	36
51	Minneapolis, Minn	Minneapolis Normal Training School	Fannie Guptill	0	37	0	0	0	37	0	29
52	St. Cloud, Minn	State Normal School	Thomas J. Gray	13	75	120	75	41	114-152	0	31
53	St. Paul, Minn	Teachers Training School	Miss J. L. Terry	12	0	50	118	108	38	0	44
54	Winona, Minn	State Normal School	Irwin Shepard	15	41	186	63	138	538	0	51
55	Holly Springs, Miss	do	E. D. Miller	3	51	24	0	0	76	0	2
56	Tougaloo, Miss	Tougalaoo University	F. G. Woodworth	3	19	14	160	190	128	8	0
57	Walthall, Miss	Walthall Normal School	Daniel Harmon	3	4	0	80	40	40	30	2
58	Cape Girardeau, Mo	Missouri State Normal School, Third District	R. C. Norton	10	214	135	0	0	160	0	45
59	Kirksville, Mo	State Normal School, First District	J. P. Blanton	11	239	281	0	0	160	0	16
60	St. Louis, Mo	St. Louis Normal School	F. Louis Solden	8	0	156	0	0	60	20	
61	Warrensburg, Mo	State Normal School, Second District	George L. Osborne	13	321	423	48	60	80-160	20	70
62	Peru, Nebr	State Normal School	George L. Farnham	10	163	311	0	0	76-114	0	82
63	Manchester, N. H	Training School for Teachers	Caroline E. Wing	1	0	12	0	0	56	0	13
64	Plymouth, N. H	State Normal School	Charles C. Rounds	11	3	99	0	1	76	0	21
65	Newark, N. J	Newark City Public Normal and Training School	K. S. Blake	5	0	84	266	267	80	0	40
66	Paterson, N. J	Normal Training Class	L. H. White	2	0	40	0	0	40	0	39
67	Trenton, N. J	State Normal School	James M. Green	12	19	247	227	262	114	0	57
68	Albany, N. Y	do	William J. Milne	17	0	449	0	0	80	0	123
69	do	Training Class	Euretta Crannell	1	0	26	0	0	40	0	18
70	Brooklyn, N. Y	Training School for Teachers	John Gallagher	14	0	73	406	368	40	0	40
71	Buffalo, N. Y	State Normal School	James M. Cassety	12	30	370	13	8	80-160	0	47
72	Cortland, N. Y	State Normal and Training School	James H. Hoose	14	166	246	0	0	80-160	0	84
73	Fredonia, N. Y	do	F. B. Palmer	17	(235)		(96)		40-160	0	30
74	Geneseo, N. Y	State Normal School	John M. Milne	17	150	330	150	250	80-160	0	73
75	New Paltz, N. Y	do	F. S. Capen	13	(139)		(291)		80-160	0	30
76	New York, N. Y	Normal College	Thomas Hunter	12	0	550	0	1,254	160	0	271
77	Oneonta, N. Y	State Normal and Training School	James M. Milne	15	38	105	100	106	80-160	0	11
78	Oswego, N. Y	do	E. A. Sheldon	15	51	359	0	0	80-160	0	76
79	Potsdam, N. Y	do	Thomas B. Stowell	15	147	316	54	115	40	0	37

* For 1888-89.

† For 1887-88.

a Reported as ten.

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To these questions the superintendents of the several institutions have replied as follows:

Superintendent Hatch, of Colorado: (*a*) No data. (*b*) No changes.

Superintendent Howe, of Connecticut: (*a*) The cottage stystem admits of any desirable classification. The natural classification is not by age. The natural family is composed of children of all ages. One or two boys or girls ("deeply tainted with vice and crime") can safely be placed in a family of good boys or girls and thereby be cured by the contact. Nothing is so efficacious in converting the wayward as to make them feel that they are a part of good society. (*b*) The cottage system has been adopted and carried into effect in Connecticut within the last twelve years.

Superintendent Haines, of Delaware: (*a*) I consider it very desirable to separate those more deeply tainted with crime from the other inmates and think that the cottage system answers the purpose to a certain degree. (*b*) No change.

Superintendent Shallenberger, of the District of Columbia: Ours is the cottage or family system and consists of three separate divisions. The separation consists in a division of the older from the younger boys. In each family there are two school grades. Out of school session the family is a unit for both work and play. Each family has two dormitories, one for the older and one for the younger boys. Classification other than this, in my judgment, is not important enough to justify the additional expense attending further or special separation. (*b*) Several years since another, the third, family was organized and placed in our new building. This made it possible to secure a separtion of our older from the younger boys—as indicated under (*a*) above. This has been a decided improvement, although our families are still too large. With another building we could make the association in each still more satisfactory.

Superintendent J. D. Scoulter, of Illinois: (*a*) We have both the cottage and the congregate system. There should be no mixing of good and bad, vicious and virtuous in an institution when you can draw the line from personal knowledge. The cottage system is perhaps the best for the separation of pupils by age and character. There should be a central cottage or building where all pupils newly committed (or a large per cent of them) should be on probation before being classified according to the commitment, as information given by interested parties generally furnishes a reliable clue to the true character of the boy committed.

(*b*) We have added one family building or cottage.

Superintendent Mary Lyons, of Illinois: There is no doubt that the cottage system has many advantages over any other, but for various reasons we have not been able to adopt it.

Superintendent Sarah F. Keeley: I think that the cottage system is the better. However, we have not introduced this system, but classify our children by age, keeping the younger ones separate from the older.

Superintendent T. J. Charlton, of Indiana: (*a*) I do consider the cottage system entirely adequate to secure the separation of the more "deeply tainted" from those inmates who are less vicious. I do not consider the classification by age as nearly so good as the method in use here of classifying them upon the basis of character. We have four families of large boys. Two of these families are all criminals; the other two, however, are boys of a much higher moral grade.

(*b*) None, except that we are more particular to classify boys as to character.

Superintendent C. C. Cory, of Iowa: (*a*) We have two families; one in general dormitories in one building, one in single dormitories in another building, and much favor the latter. We have no girls that are what would be termed extremely "vicious," and have as yet no necessity for segregation. Only for brief periods is anyone subject to unusual restraint. The more intractable are more benefited by associating with the good than the latter are injured by the contact, contamination being prevented simply by family oversight.

(*b*) None. Next year we expect to erect another family building with single dormitories, making three families.

Superintendent Buck, of Kansas: (*a*) If properly classified the cottage is preferable.

(*b*) Formed a family of small boys.

Mother Matron of St. Scholastica, Newport, Ky.: According to our rule it is absolutely necessary to have these classes separate; but as we have as yet received none of the vicious class there has been no need of segregation.

Superintendent Farrington, of Maine: (*a*) I think the cottage system partially answers the purpose mentioned above. I do not believe that the segregation of the more vicious amounts to very much the same thing as the classification of all the pupils by age.

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(*b*) No change in the general system of classification. Our first cottage is nearly completed and will soon be ready for occupancy.

Brother Dominic, Carroll Station, Md.: (*a*) We have not tried the cottage system yet and hence can not say much for or against it. But from my experience it is of vital importance in the reformation of those children who are not so deeply tainted to separate them from those more vicious; and in this case the cottage system is preferable, and certainly preferable to classification by age.

(*b*) None. We have always endeavored to keep the younger boys separated as much as is practicable from the older. This we do in the dormitories, in the playgrounds, and to a great extent in the shops and class rooms.

Superintendent Mrs. Brackett, of Massachusetts: (*a*) We have the cottage system, and believe that all inmates should be classified according to the past record of the inmate and not according to age. I do not think the segregation of the more vicious amounts to the same thing as classification by age. Some of our younger pupils are more vicious than some of the older ones.

(*b*) No data.

Superintendent Risk, of Massachusetts: I think the cottage system is the best as far as my experience goes, and it is upon this system that our school is conducted.

Superintendent Eldridge, of Massachusetts: (*a*) Think favorably of the cottage system and more of separation on the basis of character than classification by age. Think truant schools should not be maintained in alms houses.

(*b*) None.

Superintendent Johnson, of Massachusetts: (*a*) The cottage system answers the purpose better than any other system. The segregation of the more vicious answers a much better classification than can be done by age.

(*b*) No changes, as we have had but one family of 30 boys.

Superintendent Chapin, of Massachusetts: (*a*) There should be, I think, more care in the separation of the two classes named; but in general classification by age and by school attainment serves the purpose with the cottage system to help.

(*b*) In 1885 the school was remodelled on the cottage plan. It started with an administration building, where the superintendent and the most unmanageable boys were to be located, and three cottages to accommodate 30 boys each. Two years ago the large building was remodelled for two groups and at present the school consists of six cottages as nearly independent as it is possible to make them and have them supervised by one superintendent. The main mode of arriving at a classification is to grade them according to proficiency in knowledge.

Superintendent Margaret Scott, of Michigan: (*a*) I think it does.

(*b*) This institution was organized under the cottage system and no change seems desirable.

Superintendent Gower, of Michigan: We have the cottage system.

Superintendent Brown, of Minnesota: (*a*) I believe that division of the children into families of 40 to 50 each, according to age, answers all purposes and with proper supervision the danger of contamination by the more vicious will be reduced to the minimum.

(*b*) Have always been working on the cottage plan, but when we occupy our new buildings the classification will be more perfect, as the families will not be so large.

Superintendent Shaffer, of Missouri: (*a*) Separation is good, say into three classes: (1) Those entirely good, (2) the large vicious, (3) the small vicious; the latter divisions being, of course, by age.

(*b*) Separation into two classes, to wit, good and bad, on the congregate system.

Superintendent Otterson, of New Jersey: Classification by age is not the proper way to classify. Classification should be made according to the moral condition of the inmates; that is to say, the separation of the more vicious from the less, irrespective of age. The cottage or family plan presents an opportunity to accomplish this as no other plan can.

(*b*) Our institution was founded on the cottage system in 1865. Of late years a more rigid separation has been tried.

Superintendent Mrs. McFadden, of New Jersey: (*a*) I do think it answers the purpose in a great measure. I think the classification should be made with regard to crimes committed rather than age, as many young in age are old in vice.

(*b*) None; as our school only numbers about one family.

Superintendent Corrigan (Brooklyn Truant Home), of New York: For our institution, no. The boys confined in this institution are not vicious, only mischievious, and I consider that the dormitory system is the best.

Superintendent Carpenter, of New York: (*a*) I consider it highly desirable to separate those more deeply tainted with vice and crime from the other inmates of the institution. The segregation of the more vicious amounts to very much the same thing as a classification of all the inmates by age.

(*b*) The school has been classified as follows: (1) Senior department, oldest boys and two other subdivisions, according to age. (2) Primary department, boys from 7 to 10. (3) Girls' department. Each department is complete in itself and is entirely separated from the other departments.

Superintendent Jones, of New York: (*a*) There appears to be no appreciable difference in the results of the two systems.

(*b*) None.

Superintendent Brother Leontine, New York Catholic Protectory: (*a*) I admit that the cottage system—that is, separating the really vicious from the others—certainly has good moral results, but without strict supervision on the part of the prefect or master the cottage system is a failure.

(*b*) None.

Superintendent Crawford, of Ohio: (*a*) The cottage system does fairly well. The segregation of the more vicious is much the same as classification by age.

(*b*) None.

Superintendent Hite, of Ohio: (*a*) Yes; the cottage system is the only system that is in any sense reformatory, and its plans of separating the smaller inmates particularly from the larger ones is specially beneficial to both small and large pupils. We do not think the separation of the more vicious from the same ages of the vicious is beneficial to the vicious; but, on the other hand, have experienced that the contact of this vicious class with a better class, who are in the ascendency as to number, is helpful to the vicious and but very little harmful to the better class, if harmful at all.

(*b*) In 1878 all the smaller boys were classed by themselves and completely isolated from the larger boys. There has been much improvement in the housekeeping at the cottages during the decade.

Superintendent Laverty, of Pennsylvania: (*a*) We regard the cottage system as manifestly to the advantage of the pupils by separating and classifying them according to age and moral condition, with a more critical supervision and more intimate influence exerted by their care-takers.

(*b*) None. A new institution is now being erected at Glen Mills, Delaware County, Pa., for the transfer of the departments of boys, to be reëstablished on the most approved methods of the cottage or family system.

Superintendent F. H. Nibecker, of Rhode Island: (*a*) I consider the family system, when fully carried out—each family having its own dining room, play grounds, and school, the pupils of the different families coming in contact with one another only during hours of actual labor and when they are under constant supervision and instruction—as of vital importance to reform school work. In a small school classification by age is the nearest to moral grading possible. In a school of sufficient size to allow more than one family of same age a closer and truer moral gradation may be had.

(*b*) During the decade this school has been changed from a refuge or close school to a family school with congregate dining room and families, not classified by age. Within the last four years the school has been closely graded into four families. those of like age being in same family, etc., as noted above.

Superintendent Ainsworth, of South Dakota: (*a*) As a rule the cottage system will do the work, provided the cottages are under the charge of suitable persons. Our boys, good and bad, are kept together; but there are always one or more persons with them of good character.

(*b*) When more buildings are needed cottages will be erected with a capacity of from 30 to 35 children and the proper number of attendants, etc.

Superintendent McCulloch, of Texas: I think that the cottage system answers the purpose.

Superintendent Andrews, of Vermont: (*a*) I think the cottage system is better than the congregate.

(*b*) None.

Superintendent Sarah E. Pierce, of Wisconsin: Yes. Have adopted the cottage system, classified older pupils according to morals; younger pupils according to age and sex, the boys being under 10 and composing one family.

Superintendent Sleep, of Wisconsin: (*a*) We have what is termed the cottage system, but do not classify with respect to vice and crime to any extent. We class with some respect to age and size. I am of the opinion that a classification with respect to vice and crime properly done would work for good.

(*b*) None.

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II.

Without discussing the case in which a reformatory is a mere temporary place of detention until the boy can be properly located in a home, it is interesting to inquire what efforts are made for his future welfare when the time has come for his being dismissed from an institution or otherwise discharged. Invariably places are secured for the boys by the school authorities. Sometimes these are in the country, at others in the city. One institution of the East has an agency in Illinois to care for the boys. The usual mode of obtaining information as to the manner in which the student is deporting himself is by periodical reports in writing, but in several States a more vigorous and reliable method is employed. Thus the Lyman School for Boys at Westboro, Mass., reports that in 1889 a special agent was appointed whose sole business is to visit the "probationers," to encourage them, right their wrongs, adjust their disputes with employers, find more suitable homes if they are not doing well, and in general make them feel a sense of continued responsibility to the State to do well. The result of every visit is reported to the central bureau and to the superintendent of the school. At another reformatory institution, the State Primary School of Massachusetts, the boys are frequently visited by agents in the employ of the State. For the care of the girls placed out in families from the Massachusetts school for girls, ninety ladies are employed by the State board. In New Jersey a regularly employed "visiting agent" visits the boys three or four times a year, with power to recall to the school any who are relapsing. In the New York Juvenile Asylum there is a visiting agent for such pupils as are returned to friends, and the school has ever exercised as close a supervision as means would allow. The House of Refuge at Philadelphia has a competent officer visit the paroled pupils every six months.

At the New York Catholic Protectory the visitation is annual, but the organization of the church carries aid in this business of supervision. The pastor of the parish in which the boy resides is corresponded with and presumably is interested in the welfare of the boy. In Ohio, on the other hand, the State organization becomes the organ of supervision, for the judges of the courts are required to appoint supervisory committees in every county, who are to oversee the boys that are sent from the school. In Kansas the county superintendent of public instruction is the visiting agent.

III.

Two other questions of considerable importance remain. These are so connected that they may be discussed together. They relate to the time the pupil may be detained in the school and the trade taught him while so detained. The following discussion is based on the replies to these questions:

Assuming for convenience that certain disadvantages of the contract system tend to neutralize its undoubted advantages as a substitute for the manual work essential to teaching habits of industry and a trade, what effort, if any, have your trustees made during the decade 1880-90 to supplant the substitute by real technological instruction, and do you think such purely technical instruction feasible in view of its nonremunerative character?

Assuming further that the instruction of the delinquent at the institution is of no avail unless he is under its instruction for a sufficient time, what change, if any, in the way of lengthening the time the pupil is consigned to your care has been inaugurated by the courts or instituted by law?

Superintendent Hatch, of Colorado: No effort made by trustees. Theoretically, I believe purely technical instruction feasible. Have had no experience. Possible term of detention has been shortened from minority to three years. Bad change.

Superintendent Howe, of Connecticut: In my opinion it is not practical to give technological instruction to an entire institution. A few of the older boys may be so taught, but it is necessarily expensive. We have not introduced technological training, but hope to soon to a limited extent. We teach habits of industry, but our industry is remunerative, which is always an incentive to labor. The law of definite sentences has been changed to indefinite or during minority. A boy can grade out of the institution by uniform good conduct in twelve months; but he goes on probation and may be returned to the institution at any time his conduct may not be good.

Superintendent Haines, of Delaware: We have no technological instruction in this institution as yet. I do think such instruction very valuable, and ought to be in every institution of this kind, without regard to its remunerative character.

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Superintendent Shallenberger, of the District of Columbia: We have never contracted the labor of our boys, much preferring piecework at a fixed rate. This gives the school authorities entire control of both the work and the discipline. The trustees have repeatedly urged the propriety of establishing workshops under skilled foremen in order to teach useful trades and thus fit the boys to take their places when discharged as first-class mechanics. Every reformatory institution or industrial school should be provided with means to such an end, whether remunerative or not. Our boys are all committed during minority, unless sooner discharged by the board of trustees; hence they could regulate the time required for any boy to remain at his trade. No boy should be forced to learn any special trade, and there would be no necessity for so forcing him, as a large number are always anxious to acquire some handicrafts and would undergo any ordinary discipline to secure the means of becoming first-class mechanics.

Superintendent Scoullar, of Illinois: The contract system is supplanted here by State-account plan. Have made no effort until recently to introduce technological instruction. It may not be feasible with State legislatures, in view of its nonremunerative character, but we believe that it is a move in the right direction, though it must be borne in mind that such training will never make a mechanic; it can only develop a taste for some industry. Sentences are fixed by law.

Superintendent Sarah F. Keely, of Indiana: Our manual labor is simply to teach the girls the common industries of life, thus fitting them for lives of usefulness. We do not aim to make money, but work for the reformatory power there is in work. Under our old law girls were committed until 18, while under the new law of 1888 they are committed until 21.

Superintendent Charlton, of Indiana: Our trustees ten years ago abandoned the idea of making money out of the labor of the boys. They are now working to instruct boys and not to make them a source of revenue. I most certainly regard technical instruction as feasible. We have detained boys on an average about twenty months. I think that two years would be better.

Superintendent Cory, of Iowa: As yet we have no productive industry. Only domestic economy and common school work receives attention in the instruction of the girls.

Superintendent Buck, of Kansas: We have never had the contract system. All are committed during minority.

Superintendent Farrington, of Maine: I think such technical instruction is feasible, notwithstanding its nonremunerative character. We have established a mechanical school, where the elements of carpentry are taught. Boys are sentenced during minority, and trustees may discharge boys whenever they believe them to be reformed.

Brother Dominic, Carroll Station, Md.: Though we have eight or nine industries or trades—printing, shoemaking, tailoring, floriculture—we find that our boys do not and can not remain long enough in the institution to teach them the trades thoroughly. One advantage, however, is that they learn habits of industry and how to work. I think, so far as remuneration in shops in reformatory institutions is concerned, it is a failure. Nothing of the kind ever undertaken by us has paid. The board, or rather the committee having the matter of supervision of the shops, have established this rule within the last year, that any boy entering a shop for the purpose of learning a trade must remain there four years. This supposes him to enter at 13 and upwards.

Superintendent Johnson, of Massachusetts: No effort has been made except to give instruction in carpentry. I think boys should be placed out to get special instruction and should not remain in an institution more than two years. Truant boys are now committed for two years instead of one year as formerly.

Superintendent Chapin, of Massachusetts: Last year the Swedish system (Sloyd) was introduced, and during the last year all pupils have been instructed in it. Growing boys can not be used to carry on a profitable contract system without defeating the ends for which a reform school is established. Boys are sent here during their minority. Formerly the practice was to release boys after fifteen months' stay on good behavior, *i. e.*, as long as good conduct continued. This time has been found insufficient, and the shortest period will probably be hereafter two years.

Superintendent Margaret Scott, of Michigan: We have no contract labor that interferes or retards in any way the plan of the institution, which is to teach every girl domestic work, including sewing, and the half-day's training in day school. No change in the way of lengthening the time the pupil is consigned to the school is required.

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Superintendent Brown, of Minnesota: Have always managed our manufacturing on the State-account plan and with special reference to the benefit of the children. I believe purely technical instruction to be feasible. We have not been able to lengthen the time, because of limited accommodations, but believe the time of detention should be increased when accommodations will permit.

Superintendent Shaffer, of Missouri: No change during the last ten years. Teaching habits of industry simply is not of so much importance as teaching them a trade by which they can earn their living after leaving institutions.

Superintendent Otterson, of New Jersey: A printing office has been established, where 8 to 12 boys are taught all parts of the work. We issue a paper to enable them to have regular work. We also printed our last annual report and do all our job printing. Boys are taught in all trades that can be made useful to the institution, though none are purely technological. To be of value there should always be a purpose. All boys committed were committed during minority, but by good conduct could earn their release in 14 months. The trustees have just had an act passed which requires that all boys should remain not less than three years. This to the end that we may do more trade-teaching as well as school work.

Superintendent Mrs. McFadden, of New Jersey: Shirt work was carried on to some extent, but we give our girls instruction in all branches of housework. They are also advantageously employed on the farm in weeding, harvesting, etc. The time of maximum detention has been changed from 18 years of age to 21.

Director Round, of New York: We pay each boy 1 cent each day, providing he earns his 3 mills for education work, 3 mills for morals, 2 for deportment, 1 for care of person, and 1 for care of clothing. His failure to earn 70 per cent of his mills for any month puts him down one month. He is compelled to go through three grades of six months each before being released. The boy really controls the time that he remains at the institution after eighteen months.

Superintendent Carpenter, of New York: Our older children make all the shoes and clothing of the inmates and do all house and farm work. Nothing is sold. Much like a boarding school, where the children work for their board and clothing and go to school. Thirty years' experience has taught us that children should seldom be discharged in less than one year or be retained longer than about two years; hence children are retained here from one to two years.

Superintendent Jones, of New York: They have established all the industries on State account. The object of labor in the institution is regarded for its disciplinary power rather than for profit in money values. No change in length of commitment. All commitments are during minority, though at the discretion of the managers the pupil may be discharged before he has reached his majority.

Brother Leontine, of New York: We have no contract system here. We manufacture the material for the employés, and are the sole masters of the labor of our inmates, which labor is more for the benefit accruing to them than for the gain to the institution. Rather than deprive a girl or boy of learning a trade or business that will be of use to him after leaving the institution, we make it a rule to retain such inmates at our own cost. In addition, we pay or put by for them a sum each month, so that on leaving they will have something to rely on for support. Within the last five years many have had as much as $50, $75, or $100 to their credit on leaving.

Superintendent Hite, of Ohio: Since 1884 a polytechnic building has been erected and has shown that it would be better to discontinue such industries as brush-making, knitting by machinery, cane-seating chairs, etc., and adopt manual training instead, even in view of its unproductiveness. There has been no law compelling an inmate to remain a definite length of time. The rule adopted at this institution is that no inmate will be sent home under one year from the time he enters. All the courts commit during minority or until reformed.

Superintendent Laverty, of Pennsylvania: Technological instruction has not been adopted to any extent. When we have reëstablished ourselves at the new location in Delaware County rudimentary instruction in standard trades will be introduced. We believe a more lengthened period of detention is important. The managers have been unable to adopt it, owing to the overcrowded condition of the boys' departments.

Superintendent Nibecker, of Rhode Island: In 1885 printing was introduced and has been successfully prosecuted. Many competent printers have been turned out, who have always found good places. In May, 1890, $25,000 was appropriated for the introduction of other trades in the school. Technological instruction is feasible. It is improper to consider that children should be made a source of revenue.

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Superintendent C. W. Ainsworth, of South Dakota: The contract system is a political move more than anything else. Our time is mostly spent on the farm and in the garden, aside from the three and one-half hours a day in the schoolroom. We have a small printing office, in which are nine boys. Boys take care of stock and assist in the household duties, etc. No child should be released until the rudiments of a good education have been obtained and a knowledge of some kind of industry that will enable him to obtain an honest livelihood.

Superintendent McCulloch, of Texas: Only have the farm.

Superintendent Andrews, of Vermont: Yes; I do consider purely technical instruction feasible.

Superintendent Sleep, of Wisconsin: I think that we never have had the contract system. Ten years ago this winter the law changed the system of releasing from 21 to 18 years of age, but after 6 years it was restored to 21 years. Supervisors have authority to remove at any time.

TABLE 1.—*Summary of statistics of reform schools for 1889-90.*

Division and State.	Number of institutions.	Number of assistants.	Pupils.							Expenditures.	
			Sex.			Race.		During year.		Buildings and improvements.	Support.
			Male.	Female.	Total.	White.	Colored.	Committed.	Discharged.		
1	2	3	4	5	6	7	8	9	10	11	12
United States	54	1,113	11,668	3,066	14,734	12,283	1,404	6,911	7,660	$369,043	$2,322,498
N'th Atlantic division	27	577	5,729	1,656	7,385	6,665	658	4,712	4,683	178,833	1,454,735
Maine	1	15	115	0	115	112	3	40	53	8,500	26,377
New Hampshire	1	12	98	14	112	110	2	34	30	1,500	18,000
Vermont	1	15	70	13	83	78	5	38	29	1,000	11,725
Massachusetts	12	113	994	348	1,342	1,261	59	1,549	1,105	8,414	476,329
Rhode Island	1	20	238	0	238	214	24	150	120	0	31,717
Connecticut	1	42	458	0	458	415	43	219	188	15,871	59,480
New York	5	201	2,424	955	3,379	3,165	214	2,247	2,154	117,733	549,508
New Jersey	3	21	363	52	415	319	56	173	141	2,915	60,632
Pennsylvania	2	138	969	274	1,243	991	252	827	863	22,900	220,877
S'th Atlantic division	4	45	645	0	645	508	137	301	268	21,416	80,575
Delaware	1	4	41	0	41	19	22	18	4	0	7,884
Maryland	2	16	406	0	406	406	0	172	176	10,116	34,095
Dist. of Columbia	1	25	198	0	198	83	115	111	98	1,300	38,596
South Central division	3	35	202	33	235	70	49	112	19	2,450	15,302
Kentucky	1	20	0	32	32	32	0	10	4	0	.....
Louisiana	1	6	116	0	116	0	0	0	0	0	.....
Texas	1	9	86	1	87	38	49	102	15	2,450	15,302
North Central division	18	434	4,683	1,286	5,969	4,909	554	1,678	2,587	156,224	701,317
Ohio	3	124	1,012	421	1,433	1,220	213	345	568	9,997	159,554
Indiana	2	29	469	144	613	523	90	249	279	10,659	85,603
Illinois	2	39	382	110	492	431	61	250	174	17,833	68,504
Michigan	3	83	1,345	237	1,582	1,511	71	333	1,181	6,106	178,457
Wisconsin	2	20	469	149	618	606	12	180	107	2,600	22,527
Minnesota	1	30	252	23	275	264	11	106	105	39,327	54,868
Iowa	1	12	0	115	115	102	13	33	24	3,700	4,059
Missouri	1	27	202	74	276	195	81	166	145	1,705	39,084
South Dakota	1	12	46	13	59	57	2	16	4	500	15,150
Nebraska	1	32	249	0	249	.....	.....	.....	.....	60,000	52,699
Kansas	1	26	257	0	257	.....	.....	.....	.....	3,701	23,852
Western division	2	22	409	91	500	131	6	108	103	10,120	70,569
Colorado	1	16	135	2	137	131	6	108	103	9,000	34,000
California	1	6	274	89	363	.....	.....	.....	.....	1,120	36,569

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TABLE 2.—*Statistics of reform schools for 1889–90, or thereabout.*

	Post-office address.	Name of school.	Name of superintendent.	Number of assistants.	Sex.		Race.		During year.		Expenditures.	
					Male.	Female.	White.	Colored.	Committed.	Discharged.	Buildings and improvements.	Other.
	1	2	3	4	5	6	7	8	9	10	11	12
1	San Francisco, Cal	Industrial School (a)	J. W. Selk	6	274	80					$1,120	$36,569
2	Golden, Colo	State Industrial School of Colorado	Dorus R. Hatch	16	135	2	131	6	108	103	9,000	34,000
3	Meriden, Conn	State Reform School	George E. Howe	b42	b458	b0	b415	b43	b219	b188	15,871	59,480
4	Wilmington, Del	Ferris Industrial school	H. E. Haines	4	41	0	19	22	18	4	0	7,884
5	Washington, D. C	Reform School of the District of Columbia	George W. Shallenberger	25	198	0	83	115	111	98	1,300	26,596
6	Pontiac, Ill	State Reform School	J. D. Scouller, M. D	29	382	0	327	55	190	144	2,000	54,142
7	South Evanston, Ill	Illinois Industrial School for Girls	Mary Lyon	10	0	110	104	6	60	30	15,838	14,362
8	Indianapolis, Ind	Reform School for Girls and Woman's Prison	Miss S. F. Keely	16	0	144	139	5	48	42	7,320	28,943
9	Plainfield, Ind	Indians Reform School for Boys	T. J. Charlton	b13	469	0	384	85	201	237	3,339	56,660
10	Mitchellville, Iowa	Iowa Industrial School, Girls' Department	C. C. Cory	12	0	115	102	13	38	24	3,700	4,059
11	Topeka, Kans	Kansas State Reform School	J. F. Buck	26	b257						3,761	23,852
12	Newport, Ky	House of the Good Shepherd	Mother Matron of St. Scholastica.	30	0	32	32	0	10	4		
13	New Orleans, La	Boys' House of Refuge	W. C. Staunton	b6	b116							(c)
14	Portland, Me	State Reform School	Joseph R. Farrington	b15	115	0	112	3	40	53	8,500	20,377
15	Carroll Station, Md	St. Mary's Industrial School for Boys	Brother Dominic	16	406	0	406	0	172	176	10,116	34,095
16	Cheltenham, Md	House of Reformation for Colored Boys										
17	Boston, Mass	Marcella Street Home for Neglected Children	Alfred B. Heath	20	233	152	380	5	741	362	2,628	48,182
18	Boston (Deer Island), Mass.	House of Reformation	James R. Gerrish	6	82	0	80	2	121	98		
19	Boston (Deer Island), Mass.	Truant School	do	5	78	0	76	2	140	100		
20	Lancaster, Mass	State Industrial School for Girls	Mrs. L. L. Brackett	15	0	90	82	8	56	40	1,086	20,031
21	Lawrence, Mass	Lawrence Industrial School	R. B. Risk	4	34	0	34	0	17	15	503	5,524
22	Lowell, Mass	House of Employment and Reformation for Juvenile Offenders.	Albert Pindar	1	50	5	54	1	55	45	0	1,680
23	New Bedford, Mass	New Bedford Truant School	P. S. Macy	2	22	0			21	10	0	237,464
24	Cambridge, Mass	Cambridge Truant School	Martin L. Eldridge	2	14	0	14	0	14	14	0	2,500
25	Palmer, Mass	Massachusetts State Primary School	Amos Andrews	52	254	101	314	41	222	270	3,729	57,675
26	Salem, Mass	Plummer Farm School of Reform for Boys	Charles A. Johnson	4	25	0	23	0	12	12	0	6,100
27	Westboro, Mass	Lyman School for Boys	Theodore H. Chapin	1	183	0	183	0	132	115	408	39,270
28	Worcester, Mass	Worcester Truant School	B. H. Parkhurst	1	16	0	16	0	18	16	0	3,003
29	Adrian, Mich	State Industrial Home for Girls	Miss Margaret Scott	15	0	237	222	15	79	67	2,106	31,692
30	Ionia, Mich	State House of Correction and Reformatory b	E. C. Watkins	47	874	0	853	21		570	4,000	81,000

a For 1887–88. b For 1888–89. c Officers and employés

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TABLE 2.—*Statistics of reform schools for 1889-90, or thereabout*—Continued.

	Post-office address.	Name of school.	Name of superintendent.	Number of assistants.	Sex.		Race.		During year.		Expenditures.	
					Male.	Female.	White.	Colored.	Committed.	Discharged.	Buildings and improvements.	Other.
	1	2	3	4	5	6	7	8	9	10	11	12
31	Lansing, Mich	State Reform School	C. A. Gower	a11	471	0	436	35	254	244	0	$62,765
32	St. Paul, Minn	Minnesota State Reform School	J. W. Brown	30	252	23	264	11	106	105	$39,327	54,888
33	St. Louis, Mo	House of Refuge	John D. Shaffer	27	202	74	195	81	166	145	1,706	39,034
34	Kearney, Nebr	State Industrial School for Juvenile Offenders a	John T. Mallalieu	32	249	0					60,000	52,000
35	Manchester, N. H	State Industrial School	John C. Ray	12	96	14	110	2	34	30	1,500	18,000
36	Jamesburg, N. J	State Reform School for Juvenile Delinquents	Ira Otterson	16	363	0	315	48	145	122	2,000	53,000
37	Newark, N. J	Newark City Home										
38	Trenton, N. J	State Industrial School for Girls	Mrs. M. A. McFadden	5	0	52	44	8	28	19	915	7,632
39	Brooklyn, N. Y	Brooklyn Truant Home	Patrick H. Corrigan	2	356	0	336	20	356	277	0	18,183
40	Canaan Four Corners, N. Y.	Burnham Industrial Farm	W. M. F. Round	6	48	0	48	0	33	5	0	12,800
41	New York, N. Y	New York Juvenile Asylum	Elisha M. Carpenter	70	788	188	879	97	638	702	58,000	123,224
42	do	New York House of Refuge	Israel C. Jones	70	482	73	462	93	397	384	3,757	115,371
43	West Chester, N. Y	New York Catholic Protectory	Brother Leontine	53	750	694	1440	4	823	786	55,976	280,020
44	Delaware, Ohio	Girls Industrial Home	J. M. Crawford	33	0	289	256	33	72	68	1,075	39,984
45	Cincinnati, Ohio	Cincinnati House of Refuge a	Henry Oliver	35	412	132	464	80		237	6,392	45,573
46	Lancaster, Ohio	Boys Industrial Home	J. C. Hite	56	600	0	500	100	273	263	2,500	75,997
47	Morganza, Pa	Pennsylvania Reform School	Jerome A. Quay	42	397	112	438	71	b343	306	12,488	85,997
48	Philadelphia, Pa	The House of Refuge	J. Hood Laverty	c96	572	162	553	181	484	557	10,412	134,880
49	Howard, R. I	Sockamosset School for Boys	F. H. Nibecker	20	238	0	214	24	150	120	a0	a31,717
50	Plankinton, S. Dak	South Dakota Reform School	C. W. Ainsworth	12	46	13	57	2	16	4	500	15,158
51	Gatesville, Tex	House of Correction and Reformatory	Benj. E. McCullough	9	86	1	38	49	102	15	2,450	15,302
52	Vergennes, Vt	Vermont Reform School	S. A. Andrews	15	70	13	78	5	38	29	1,000	11,725
53	Milwaukee, Wis	Wisconsin Industrial School for Girls	Sarah E. Pierce	20	31	149	174	6	180	107	a2,660	a22,527
54	Waukesha, Wis	Industrial School	W. H. Sleep		438	0	432	6				

a For 1888-89. b Sixty-nine of these were former inmates recommitted. c For 1887-88.

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CHAPTER XIII.

EDUCATION OF THE COLORED RACE.

I.—THE COMMON SCHOOLS.

The former slave States have a white population of 15,493,323, and a white school enrollment of 3,422,785, or 22.1 per cent of the white population.

The same States have a colored population of 6,954,840, and a colored school enrollment of 1,289,944, or 18.5 per cent of the colored population.

The colored form 30.98 per cent of the total population, but colored pupils form only 27.37 per cent of the total school enrollment.

These figures show that the colored school enrollment is not relatively equal to the white. It exceeds the white, as compared with the population, in the District of Columbia, North Carolina, and Texas; in the remaining States it falls behind the white—in Alabama, Georgia, Louisiana, and West Virginia far behind.

The ratio of average attendance to enrollment is 63.3 for white and 62.4 for colored in twelve States.

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TABLE 1.—*White and colored schools compared—1889-90.*

State.	Population.			Pupils enrolled in common schools.					Average daily attendance.				Teachers.	
	White.	Colored.	Proportion of colored persons.	White.	Colored.	Proportion of colored pupils.	Per cent of population enrolled.		White.	Colored.	Ratio of attendance to enrollment.		White.	Colored.
							White.	Colored.			White.	Colored.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			Per cent.			*Per cent.*	*Per cent.*	*Per cent.*			*Per cent.*	*Per cent.*		
Alabama	830,796	682,221	45.09	186,125	115,490	38.30	22.4	16.9	110,311	72,156	59.3	62.5	4,182	2,136
Arkansas	816,517	311,662	27.63	163,603	59,468	26.66	20.0	19.1					3,770	1,246
Delaware	139,429	29,064	17.25	26,778	4,656	14.81	19.2	16.0	16,798	2,851	62.7	61.2	605	96
District of Columbia	154,352	76,040	33.00	23,574	13,332	36.12	15.3	17.5	18,105	10,079	76.9	75.6	495	250
Florida	224,461	166,961	42.65	55,191	37,281	40.32	24.6	22.3					1,849	661
Georgia	973,462	863,891	47.02	230,595	150,702	39.52	23.7	17.4					5,009	2,500
Kentucky	1,585,526	273,109	14.70	354,250	54,716	13.38	22.3	20.0	200,543	30,690	56.6	56.1	7,791	1,250
Louisiana	554,712	563,875	50.41	a 84,456	a 48,137	a 36.31	a 15.5	a 8.9	50,891	36,645	a 64.2	a 78.6	1,875	801
Maryland	824,149	218,241	20.94	147,879	36,372	19.74	17.9	16.7	85,149	17,202	57.6	47.3	3,210	616
Mississippi	539,703	749,897	58.15	149,321	176,541	54.17	27.7	23.5	94,336	106,454	63.2	60.3	4,190	3,131
Missouri	2,524,468	154,716	5.77	587,510	32,804	5.29	23.3	21.2					13,065	720
North Carolina	1,049,191	568,756	35.15	205,844	116,689	36.18	19.6	20.5	134,108	68,992	65.1	59.1	4,544	2,523
South Carolina	458,454	692,695	60.17	89,372	111,888	55.59	19.5	16.2	67,185	80,614	75.2	72.0	2,688	1,676
Tennessee	1,332,971	434,547	24.58	348,941	99,009	22.10	26.2	22.8	256,669	66,879	73.5	67.6	6,438	1,790
Texas	1,741,190	494,333	22.11	382,401	104,471	22.38	20.8	21.1					8,418	2,462
Virginia	1,014,680	641,300	38.73	220,210	122,059	35.66	21.7	19.0	129,973	68,317	59.0	56.0	5,550	1,973
West Virginia	729,262	33,532	4.40	186,735	6,329	3.28	25.6	18.9	117,711	3,989	63.0	63.0	5,313	178
Total	15,493,323	6,954,840	30.98	3,422,785	1,289,944	27.37	22.1	18.5			b 63.3	b 62.4	78,992	24,009

a In 1889.

b Includes only States tabulated in the same column above.

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TABLE 2.—*White and colored teachers' salaries.*

State.	White.	Colored.	State.	White.	Colored.
Alabama *a*	$22.04	$21.05	Missouri	(*b*)	(*b*)
Arkansas	(*b*)	(*b*)	North Carolina:		
Delaware	38.25	26.55	Males	$25.80	$22.72
District of Columbia: *c*			Females	22.95	20.36
Primary and grammar schools	661.10	589.75	South Carolina	(*b*)	(*b*)
High schools	864.99	984.16	Tennessee	(*b*)	(*b*)
Florida			Texas:		
Georgia			Males—		
Kentucky: *d*			In community counties	48.17	44.66
In counties	32.76	37.82	In district counties	50.80	40.33
In cities—			In independent districts	81.19	53.82
Males	126.11	67.35	Females—		
Females	48.22	42.77	In community counties	38.10	35.12
In public high schools—			In district counties	35.58	34.20
Males	140.50	83.30	In independent districts	47.67	37.97
Females	86.39		Virginia		
Louisiana:			West Virginia	(*b*)	(*b*)
Males	38.20	26.98			
Females	32.18	26.24			
Maryland *c*	386.28	364.88			
Mississippi: *d*					
Males	38.77	26.83			
Females	32.09	20.48			

a Country schools only.
b Not classified by color.
c Annual salaries.
d In 1888–'89.

ALABAMA.

Apportionment of funds between the races in Alabama.—The Alabama State distributable school fund has heretofore been apportioned among the townships and districts according to the number of children of school age, the fund of each race being kept separate. This has caused much dissatisfaction. "It is alleged that in portions of the State the colored race gets well-nigh all the school fund, whilst that race pays a very small per cent of the taxes that make up that fund; also that the colored race is as yet, in general, only capable of receiving and profiting by an elementary education, which costs comparatively much less than that suitable for the white race in its more advanced stages of civilization." The State superintendent, without discussing whether these complaints are well grounded or not, says that there are individual cases of peculiar hardship, and suggests the following plan: "Let the school fund be apportioned by this office to the different counties and townships in proportion to the number of children without regard to race, and let the township officers apportion the fund to the schools of the township in proportion to the number of children who will probably attend each school. They, being on the ground and acquainted with the wants of the different neighborhoods, can do this to better advantage than it can be done by this office. In addition to this, there should be fixed by statute a gradation of teachers' licenses, so that well-qualified and successful teachers should receive greater compensation than the teacher who can barely stand an examination for a third-grade certificate. In all other departments persons are paid in proportion to the quality as well as the quantity of work done by them, and why should not this rule apply in the payment of teachers? Under our present apportionment of funds such is frequently the case—that the poor teacher of the colored race gets much better salary than the well-qualified white teacher. If this were left to the local school authorities such injustice and inequality would not be allowed."

This is practically what is done at present in the larger Southern cities with the local school funds (city appropriation); the municipal school boards apply the local funds to the various schools, white and colored, in their discretion. It is believed that the city colored schools are amply provided for under this system. Whether it would work as well throughout the country districts, administered often by trustees prejudiced against negro education, and especially against negro education at the white man's expense, is problematical. That Superintendent Palmer does not think it would work injustice is evident, when he declares:

"Allow me here to say that I have no sympathy with those who would deprive the colored race of an equal participation in the benefits of the public-school

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fund. I believe that it is not only our solemn duty but best interest to see that the colored race is educated and elevated so as to fit him for good citizenship, of which, in my opinion, there is not the slightest probability that he will be deprived. Nor am I in sympathy with those who would apply only the tax raised from our race for the education of that race. Such a law or provision of a State constitution would be declared by the courts unconstitutional as being against public policy and as contravening the letter and spirit of the Fourteenth Amendment of the Constitution of the United States. The plan herein suggested will go far towards remedying the evils complained of, and that, too, upon sound principles—that teachers should be paid in proportion to the quality of the work performed by them."

Superintendent Palmer's suggestion adopted—The law amended.—The legislature in 1891 changed the law so as to provide for three township trustees (instead of one) who are to dispose of the school funds derived from the State virtually as Superintendent Palmer has suggested. Mr. J. N. Hutchinson, himself a township trustee, explains their duties relating to the disposition of funds under the new law, as follows: They are required to "establish and apportion to each school just such an amount of the public funds as they deem just and equitable to carry on the schools in their township, not according to number of scholars pro rata as heretofore, but apportioning and giving unto schools as they deem best to promote free education in their township with due regard to all neighborhoods. For as the law was, where one school could get only ten pupils, in pro rating it was not sufficient to employ a suitable teacher to teach those children, and other schools had the advantage, especially the colored, which generally outnumbered the whites, receiving the most money, and the colored people paying less taxes. Hence some neighborhoods were deprived to a great extent of the benefit of schools, not being able to procure a suitable teacher on account of insufficiency of funds.

"I take the position that one teacher's time is worth as much to them as another teacher, without regard to the number of scholars they teach in the public schools, and the trustees should see that all children are offered the benefit of schooling, and that this is the intention of the law, which was wise in our legislature in so changing it, and now it becomes the duty of the trustees to carry out the law without regard to the whims and complaint of some."

The new State superintendent, Hon. John G. Harris, further explains the situation as follows:

"It is the duty of the township trustees to establish a sufficient number of schools in their township to meet the necessities of school children according to justice and equity, having reference to the amount of money apportioned to such township, paying to the teacher of each school an amount which will secure continuation of all the schools of both races, the *same length of time.*

"This law confers upon the township trustees the power to contract with teachers at an agreed amount per month for three months or more. The entire amount belonging to each township must be divided among the white schools and colored schools by the trustees according to 'justice and equity,' not per capita. One teacher may be secured to teach a certain school at one price, while another teacher may be employed to teach a different school at a greater or less sum. Trustees must use their very best judgment, looking to the highest interest of all the children to be taught. The greatest good to the greatest number must govern. Such, in my judgment, is the spirit of the law. 'Equal rights to all, special favors to none.'"

The words italicized, "same length of time," are evidently designed to be the watchword under the new order of things.

The law only covers the State school fund proper. The apportionment of the State poll tax remains as before—poll tax collected from the whites goes to white schools exclusively, ditto colored.

Colored education in Alabama.—W. B. Paterson, conductor of colored teachers institutes in Alabama, says in his report to the State superintendent: "The county superintendents and other white citizens attended the sessions of the institute, and showed much interest in the education of the colored race. I find that where a colored teacher is competent and devotes himself strictly to the work of teaching, that he can depend upon the support of the best people of the community. The county superintendents, too, discharge their duty regardless of race, and everywhere they expressed a desire to get the very best teachers possible for the colored schools.

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"The colored people are being encouraged to build school-houses, and their white neighbors are contributing liberally towards this object.

"These facts are given to make more forcible the following statement: The schools are retarded in their progress by a want of unity and harmony among the colored people themselves. Desiring to get control of the schools, they are imposed upon by incompetent teachers, who establish a denominational or a high school, with an absurdly long and very illogical course of study, and the means of the people, which might be used very profitably to double the public-school term, are wasted. I have reference here only to the efforts made in small towns to build up a college on local patronage at a tuition of $1 per month. It would be good policy for the present to let Talladega College, Selma University, Payne Institute at Selma, and the State normals at Huntsville, Tuskegee, and Montgomery attend to the higher education and let the efforts of the people be directed to improving the public schools. Not one-tenth of the pupils entering the above institutions from the public schools are prepared to take up a normal course of study."

ARKANSAS.

Apportionment of funds between the races in Arkansas.—A statement in the Annual Report of this Office for 1888–89 was calculated to create an erroneous impression as to the distribution of the State school moneys. With reference to this subject State Superintendent Josiah H. Shinn writes to the Office:

"The law apportions to all children irrespective of color. Each child in Arkansas, black and white, of school age receives the same amount of money by State apportionment. Each county in the State, irrespective of color, gets an amount of money equal to the sum of the amounts given to its children of school age; or the multiple of the equal pro rata per child into the number of children of school age in the county. The county judge then apportions the fund received from the State in the same way to the districts. Each district gets from the State a sum of money in every case equal to the multiple formed by the pro rata into the number of children in the district.

"So far the money has been apportioned as though no color line existed.

"The money is now in the hands of the county treasurer, subject to the order of the [dist ict] directors. Each district may have three funds, and must have two; (1) The State apportionment made by the State superintendent; (2) the poll-tax apportionment made by the county judge; (3) the local tax voted upon the property of the district and paid by the collector to the treasurer of the county for the use of that district alone.

"I desire to emphasize this point again. Up to this point in our financial management—the point when the directors are to open the schools—no distinction whatever has been made. It has been a question of cold calculation without one drop of blood. If any discrimination is made now, the fault will lie with the directors. The law requires them to hold separate schools for the races. There is no restriction upon the black man's right to hold the office of school director. In eastern Arkansas in a large majority of the districts the directory is black. Two plans have been adopted by directors, irrespective of color.

"1. To hold a three months' school for each color, and as much longer as their proportionate share of the district funds will continue it. This share is determined by taking the ratio of the black and white children of school age, respectively, to the whole number of children.

"2. To hold two schools of equal length, irrespective of these proportions.

"(*a*) As to the first proposition, the division is always more favorable to the colored race than to the white. Where but eight or ten children of either color were to be found in any district a trouble followed in nearly every case. Black directors saw little use in running a school for less than ten white children; so did the white ones. The legislature cured this last winter by permitting any number less than ten to transfer to the adjoining district.

"(*b*) The second proposition is on the broadest basis of fairness, and reaches the widest stretch of justice. No more can be claimed. It would be unjust to my fellow-citizens not to say further that the great majority of our school directors follow the second plan.

"In the following cities and towns the terms and all the other arrangements are equal: Little Rock, Helena, Marianna, Pine Bluff, Monticello, Lonoke, Camden, Texarkana, Hope, Nashville, Washington, Prescott, Malvern, Conway, Moulton, Newport, Augusta, Russellville, Fort Smith, Van Buren, and Hot Springs."

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DELAWARE.

The colored schools of Delaware.—"There are only 46 [colored] schoolhouses in the State and 79 schools. Thirty-three of the schools are held either in private houses or churches, mostly the latter. All the schoolhouses occupied have been built by the colored people themselves, and some of the buildings are in the last stages of dilapidation. Some of the schools find it necessary to charge a tuition fee and others raise funds by subscription in order to secure sufficient money to pay the teacher's salary."

The State superintendent suggests "that it would be wise to increase the State appropriation to these schools in order that they may be made free schools in fact. If education is a safeguard it would seem to need no argument that the colored schools should be made as efficient as possible."

The sum of $6,000 was appropriated for these schools in 1889-'90, or a little over $1 for each colored child of school age in the State.

FLORIDA.

Capacity of colored students—Appreciation of school advantages.—The principal of the Florida State Normal College for Colored Persons reports: "The students are specially drilled in the abstract sciences in which they are the weakest, while their strong linguistic powers are given the fullest exercise. The imperfect attainments in the common studies which they bring to the institution are displaced by a severe training in the same studies, when they are carried through algebra to quadratics and through several books of geometry. In all these studies they can compete favorably with scholars of similar grade anywhere. In the Latin, the only classic thus far taught, they are carried through several books of Cæsar's Commentaries, just enough to give them a proper foundation to continue the study of the thoughts of the iron-hearted masters of the ancient world after graduation. Although it is less than two years since the senior class began the study of Latin, several of them can now read Cæsar with an ease and elegance that would do credit to scholars who have been engaged twice the length of time in studying this language.

"The surest test for the appreciation of the race for the school is in the sacrifices made by patrons in sending and maintaining scholars here, and the eagerness of the latter to avail themselves of the opportunity offered them for instruction. With limited means or from daily earnings parents send their children to this school from distant parts of the State and meet all the financial engagements incident to the education of a young person during the entire session of nine months. Although this is the second year since the school has had dormitory halls, not only has every patron met all his obligations, but the demand for more room in the dormitories is restricted by our inability to provide for any more new-comers.

"The promptness and regularity of attendance at the daily sessions of the school is another proof of high appreciation. No severer punishment for breach of discipline can be inflicted on any of them than to be ordered to leave school for even part of a day. They seem to feel that every day and hour are too precious to be lost from the prosecution of the purpose for which they have come hither from their homes. This strong regard and attachment for a school but lately established is one of the most pleasing features which promise for it, let it be hoped, a long career of usefulness."

GEORGIA.

State School Commissioner James S. Hook: "It is due the colored people to say that everywhere in Georgia, as far as they have come within my observation, they are anxious for improvement, and in proportion as they become interested in the schools I note growth in moral sentiment, less interest in partisan politics, and more anxiety to make themselves useful and respected citizens."

The University of Atlanta, as is well known, has, under the provision of the State constitution forbidding the coeducation of whites and colored, forfeited its State grant. Some of the prominent colored educators of the State are setting on foot a movement to obtain this suspended grant in order to establish a normal school for training colored teachers.

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What the county superintendents say.

Crawford County.—Colored schools were well attended, but a decrease in number of schools, on account of not being able to get teachers that could make the required percentage in examination.

Houston County.—The colored people manifest a great desire to have their children educated; their schools were kept full and the average attendance was good. The colored children of our county outnumber the whites almost 4 to 1, and all their schools are full to overflowing whenever opened. In some parts of the county the white people are so sparsely settled that it is impossible for them to have schools.

Jasper County.—There is not a child of school age in the county, white or black, but what has a schoolhouse conveniently located and can attend school most any kind of weather.

Mitchell County.—The colored people of our county are very manifest in their interest of education. Many of our colored schools, if allowed, are crowded beyond accommodations.

Oconee County.—By no means tax the whites to educate the blacks. This has made a "skeleton" of what otherwise would have been a corpulent and muscular man—a giant [referring to the school system].

Putnam County.—We should have more money, negro or no negro. Something is necessarily obliged to be done or the whites will not keep up with the darkey.

MARYLAND.

The colored schools of Maryland.—Dr. James L. Bryan, school examiner of Dorchester County, Md., reports as follows: "There is great pleasure and just pride in stating that our colored schools are a credit to our system. When I began my work in this county in 1867 there were no colored schools connected with the public-school system. There were two or three run by friends outside of the State. The school board of that day made a small appropriation to two of those schools, and gradually increased the amount until the new school law of 1872 placed such schools directly under the control of the school board. Since that day these schools have increased from two or three to forty, and the teachers compare favorably with the white teachers, considering the poor advantages they have had to make themselves expert teachers. With two or three exceptions these schools occupy houses belonging to the school authorities, built generally for school purposes, and with comfortable furniture, blackboards, etc. One house, in Cambridge, used by colored pupils, cost nearly $2,500; another, in East Newmarket, cost over $1,000.

"There is small but a steady increase in the numbers attending the schools, and the results are quite gratifying.

"It is a great credit to the powers that be that this work has been done so well. It is honorable to the authorities, and should dispel all doubts of fairness in the matter of educating this class of our people."

And the examiner of Harford County says: "In a number of cases we lack suitable houses and furniture for the colored schools; but our greatest drawback in this line is an efficient corps of teachers. I do not hesitate to say that I have more difficulty in securing twenty-two suitable colored teachers than one hundred and fourteen white ones. I anxiously look forward to the day when we may rely upon the colored normal school of this State for our colored teachers.

"In many cases, too, it is difficult to secure prompt and regular attendance of colored children. Having satisfied their ambition by enrolling their names at school, the very ones most in need of its benefits are the ones most apt to be absent. Recognizing the large factor they have become in some sections, I see no higher duty the State has to perform than to do what she can to educate this large class of her citizens."

NORTH CAROLINA.

Causes of opposition to negro education.—State Superintendent S. M. Finger, of North Carolina, says: "There is much opposition to public schools in the State, and in the South generally, because of the small amount of the taxes paid by the negroes. The opposition is intensified by the belief, that is more or less prevalent, that education spoils the colored people as laborers, to their own damage and the damage of the white people. It is said that when you 'educate a negro you spoil a field hand.'

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"On this point it may be said with truth that the negro's sudden freedom and citizenship, for which he was unprepared, the privileges of education, and all the new experiences he had at and soon after the war, including much bad leadership, completely turned his head, so to speak. Forced labor to him had, during slavery, been his peculiar hardship. In his ignorance he thought the new conditions, and especially the privilege of education, were to relieve him from this curse of labor. The old negroes went earnestly to work to learn to read. They failed, but attributed their failure to lack of early opportunities. But they resolved that they would secure education for their children, and, with this special end in view, the escape from manual labor. The present generation of younger negroes has been educated too much with this purpose in view, and, because of this wrong idea, it is true that a smattering of education to many of them has caused idleness and laziness. If education is to be given them in any liberal sense by the State they must show a much higher appreciation of it. They must recognize it not as a means of relief from labor, but as a help to successful labor.

"Many of their best teachers are striving now, by precept and example, to correct these wrong ideas as to what education is to do for them, and my earnest advice to school committeemen is that they do not employ teachers who are above manual labor. A man or a woman who depends upon the money he can make by teaching a three or four months school per annum and will not apply himself to some useful labor during the balance of the time is not fit to direct the education of children and should not be employed to teach.

"The colored people must not lose sight of the fact that manual labor is the lot of almost all people, white and colored, and that this is now and will be their lot to a larger degree than that of the white people, because of the peculiar conditions and circumstances that surround them. The destiny of the negroes of the United States is in their hands, with the powerful help of the white people as they may show themselves worthy of it. Let them pay their taxes and show that education does not spoil them as laborers, at least to any greater degree than it does the whites, but that it does add to their efficiency as laborers and to their usefulness as moral and upright citizens, and all the help they need that the State can, in her financial condition, reasonably afford will be extended them.

"The white people must not lose sight of the fact that it is the labor of a country that makes its wealth, and that, therefore, the education and elevation of the children of the laborers is a proper charge upon the property of any country. If we did not have the negroes we would have some other poor people, whose children would have to be educated in the public schools. But, whatever may be said about educating the negroes, we can not afford not to improve our educational facilities, whether we consider our financial condition and progress or the perpetuation of our civil and religious liberties.

"If it is said that we are too poor, then I reply that the way to get rich is to educate our people intellectually and industrially, so that they may be able successfully to apply labor to the development of our many resources. The history of the world points out this way, and we can not fail if we walk in it. With good schools in the country districts there will be less incentive for the country people to crowd into the cities and towns to educate their children, much of the discontent and restlessness will disappear, and better success will attend their labors."

TENNESSEE.

Reports of Tennessee county superintendents.

Marshall County: Our colored schools are improving very fast. At their institute this year there was an increase of teachers and an increase in interest. All of them seem to be striving for an education, and we have some very bright minds in the colored race.

McNairy County: I have held four institutes—three for the whites and one for the colored. They were all well attended. We had some excellent workers at the normal institute at Purdy in June. I have the colored teachers better organized than the whites.

Morgan County: There are only forty-seven colored population, and they are promiscuously scattered along the railroads: hence no colored schools.

Tipton County: There seems nothing at present that promises to discourage the advancement of the public schools in this county further than that there is a growing disposition on the part of the white people of the county, who pay

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ninety-five one-hundredths of the taxes, to discontinue the public education of the "brother in black," who, notwithstanding the fact that he pays less than five one-hundredths of the taxes of our county, receives more than 50 per cent of the public-school moneys. This, the white people argue, is wrong, and should be remedied; and I heartily agree with them, and join them also, in the further opinion that the negro should bear the burden of his own education.

Wayne County: Our colored schools are progressing very well. We have some very good teachers among the colored population of our county. They are creating quite an enthusiasm among their race of people for education.

"*We can build our own schoolhouses.*"—The New York Age (edited by a colored man): Vast sums have been given by philanthropists to sustain such moral, religious, and intellectual work in the Southern States as are usually supplied from the general tax funds of the State affected and by the charity of the benevolently disposed citizens of such State. The past and the present generations of Afro-Americans have, therefore, been educated to look to the Federal Government for the protection usually afforded to the citizen by the State in which he resides and which does not inhere at all in the Federal authority as one of its conceded rights; and, worse yet, they have been educated to look to others to think and do for them to such an extent that self-reliance has been hampered in its development, so that if we want money for educational, religious, or other laudable purposes, we appeal too often to white men or to the Federal Government, instead of relying upon ourselves for it and working in combination and coöperation to secure it as others do. We can build our own churches and colleges and schoolhouses, and support them, if we would do so, out of the money wasted by us upon unnecessary pleasures and upon downright humbug; and we have got to do it in the not remote future, because the opinion is steadily gaining vantage that we are getting old enough to stand upon our own heels in this matter of self-help.

II.—SECONDARY AND HIGHER EDUCATION.

OCCUPATIONS OF GRADUATES.

The question is sometimes asked, What does the colored man do after completing a regular course in one of the universities or colleges? In order to answer this question somewhat definitely, a table has been prepared showing upon what lines of business the graduates of 17 institutions reporting this item had entered. These 17 institutions represent very fairly the work of the colored schools. Howard University is not included in this statement, as a considerable portion of its graduates are white.

The first thing to attract attention is the large number engaged in teaching, more than one-half being thus employed. As these institutions were mainly founded to supply the demand for competent colored teachers and preachers, they seem to have well accomplished their purpose. The whole number of graduates of these 17 institutions is 1,542. If from this number we subtract 82 deceased, 46 engaged in post-graduate studies, 97 married women, and 74 not reported, of the remaining 1,243 there are 720, or 58 per cent, engaged in teaching, 27 of these being professors in colleges and universities. Of preachers there are 117, or 9 per cent; of lawyers, 116; doctors, 163. Five have their whole time employed as editors of papers, while others are partly engaged in editing. There are 36 in the United States Government service, employed as clerks in the departments at Washington, as postmasters, as custom-house inspectors, as mail-carriers, etc.

Although in all of the institutions given in the list, without exception, instruction was given in different kinds of industrial work, such as carpentry, tinning, painting, brickmaking, plastering, shoemaking, tailoring, blacksmithing, farming, gardening, etc., and in many of them special attention was given to such instruction; still out of the 1,243 graduates only 12 are farmers, only 1 a carpenter, and 2 mechanics. The painters, tinners, brick-makers, shoemakers, plasterers, tailors, and blacksmiths seem to have graduated from their trades when they left their *alma mater*. It should not be inferred, however, that their handicraft availed them nothing, for it is frequently stated in the catalogues that those graduates who are engaged in teaching so long as the school term continues immediately enter upon their trades at the close of the term. The evidence of the table, however, is that a full collegiate education tends to draw away the colored student from the class of pursuits mentioned and to lead him into professional work; and as greater opportunities are annually being offered him for medical and legal education the number in these professions is yearly increasing.

TABLE 3.—*Occupations of graduates of universities and colleges.*

Institution.	Whole number of graduates.	Deceased.	Teachers.	Ministers.	Physicians.	Lawyers.	College professors.	Editors.	Merchants.	Farmers.	Carpenters.	U. S. Government service.	Druggists.	Dentists.	Bookkeepers.	Printers.	Mechanics.	Butchers.	Graduate students.	Other pursuits.	Not stated.	Married and keeping house.
Allen University, South Carolina	69	2	26	5	.....	5	2	....	2	3	....	4	....	....	....	....	1	....	12	....	5	2
Atlanta University, Georgia	215	19	116	8	4	2	1	....	4	....	....	14	....	....	....	....	....	....	....	....	12	45
Berea College, Kentucky	49	8	13	6	1	....	3	2	1	2	....	....	....	....	....	....	....	....	....	3	6	2
Central Tennessee College, Tennessee	200	3	38	25	138	14	2	....	....	....	....	1	4	14	....	....	....	....	4	6	....	11
Claflin University, South Carolina	174	8	109	15	6	.....	.....	....	2	6	1	3	....	....	1	....	....	3	8	3	....	9
Fisk University, Tennessee	158	8	87	13	5	5	5	....	1	....	....	6	1	....	....	....	....	....	3	11	2	11
Knoxville College, Tennessee	83	8	68	2	.....	.....	.....	....	....	....	....	....	....	....	....	....	....	....	2	1	.....	.....
Livingstone College, North Carolina	44	1	19	5	.....	.....	.....	....	....	....	....	1	....	....	....	1	1	....	1	1	13	1
New Orleans University, Louisiana	30	2	8	6	1	1	.....	....	....	....	....	2	....	....	....	....	....	....	7	....	2	1
Paul Quinn College, Texas	6	....	5	.....	.....	.....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....
Philander Smith College, Arkansas	5	....	2	.....	.....	1	1	....	....	....	....	1	....	....	....	....	....	....	....	....	.....	.....
Roger Williams University, Tennessee	34	2	19	7	2	.....	.....	....	....	....	....	1	....	....	....	....	....	....	....	....	1	2
Rust University, Mississippi	70	3	29	6	3	2	2	....	1	....	....	....	....	....	....	....	....	....	6	....	16	2
Southern University, Louisiana	a16	....	a16	.....	.....	.....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....
Straight University, Louisiana	155	4	49	1	2	81	.....	2	1	....	....	....	....	....	1	....	....	....	....	....	13	1
Tuskegee Normal and Industrial Institute, Alabama	64	1	52	.....	.....	1	.....	....	1	1	....	2	....	....	....	1	....	....	2	....	1	2
Wilberforce University, Ohio	110	13	37	18	1	2	10	1	2	....	....	1	....	....	....	....	....	....	1	5	11	8
Total	1,542	82	693	117	163	116	27	5	15	12	1	36	5	14	2	2	2	3	46	30	74	97

a Number of graduates of the normal department.

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COLLEGIATE STUDENTS.

The number of universities and colleges for the education of the colored race given in the tables of 1889-90 is 22, with an attendance of 811 students. The number of institutions is the same as reported in 1888-89, but in the number of students there is quite a reduction. This reduction is owing to the fact that students in the preparatory departments have been classed under the list of institutions for secondary instruction. It is well known that in many of the colored universities and colleges there are only a dozen or so of students in the college grade, while there are, perhaps, several hundred in the preparatory and primary grades. To include the latter among university and college students would be misleading.

On this point President Horace Bumstead, of Atlanta University, says: "It is a mistake to suppose that the higher education of the colored people is being overdone. There is a very grave misapprehension on that point among the good people of our land. We have so many institutions in the South that are named universities and colleges that the idea prevails that all the students in these institutions are learning Latin and Greek and the higher mathematics and getting in general the higher education. This is not so. Dr. Haygood a few years ago investigated this matter with some care and arrived at the conclusion that in these institutions with the high-sounding names not over 5 per cent of the pupils are really getting a strictly 'higher education.' Commissioner Harris thinks there may be as many as 10 per cent, but even that is a very small proportion.

"Take Atlanta University, for instance. We have had this last year about 600 students enrolled, whose names are printed in our catalogue. How many of these are getting the higher education? Just 20 of them are in the college course; 51 more are in the college preparatory course; 71 out of 600 are getting the higher education, and this is probably a larger proportion than can be found in almost any other institution in the South. When one remembers the comparatively small number of the colored people who are in these schools and then considers the small proportion of those in them who are getting the higher education it does not seem as though the thing were being overdone."

In 1888-89 the number of institutions for secondary instruction was 53 and the number of students 11,480; in 1889-90 the number of institutions was 71 and of students 12,420, an increase of about 1,000. This increase is to be accounted for, to some extent, in the same way as the decrease in the number of university and college students, viz, the including college preparatory students in the tables of secondary institutions.

Hence, although there was apparently a decrease in the number of collegiate students, it was only an apparent one; but at the same time the actual number given is so small that it may well serve to stimulate the friends of colored education to renewed efforts in their behalf.

In the number of theological students there was apparently a decrease, but there was an increase of about one-third in the number of both law and medical students.

The value of the grounds and buildings of the 22 universities and colleges, as reported, was over $2,700,000, but only a few of them had any endowment fund, the endowment funds of all of them only aggregating $807,425. Benefactions to the amount of $167,591 were received during the year. Only three of them received any State aid—Southern University, New Orleans, $7,500; Wilberforce University, Ohio, $6,000; and Claflin University, South Carolina, $10,800. The tuition fees received by all of them only aggregated $47,216. Without the aid extended by missionary societies and other benevolent funds they would have labored under great difficulties. The American Missionary Association was one of the largest contributors towards the support of these schools. It gave help to six chartered institutions—Fisk University, Atlanta University, Talladega College, Tougaloo University, Straight University, Tillotson Normal Institute—with 2,871 students in all the departments; also to 21 normal and graded schools, with 5,797 students, and to 53 common schools, with 4,727 pupils. The Freedmen's Aid and Southern Education Society of the Methodist Episcopal Church also contributed a large amount towards the education of the colored race, but it is impossible to determine the amount accurately, as the expenditures for institutions of the white race and for ministers' salaries are included in the same accounts with those for colored schools. The whole amount disbursed from the Slater fund from 1883 to 1891, inclusive, was $321,991.

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The apportionment among the institutions receiving aid from the John F. Slater fund in 1889-90 was as follows:

Atlanta University, Atlanta, Ga	$1,600
Ballard Normal School, Macon, Ga	500
Benedict Institute, Columbia, S. C	1,000
Biddle University, Charlotte, N. C	1,000
Brainerd Institute, Chester, S. C	700
Central Tennessee College, Nashville, Tenn	1,100
Claflin University, Orangeburg, S. C	1,800
Clark University, Atlanta, Ga. (general appropriation)	1,800
Clark University, Atlanta, Ga. (special appropriation)	3,200
Fisk University, Nashville, Tenn	1,800
Gilbert Seminary, Winsted, La	800
Hampton Institute, Hampton, Va. (general appropriation)	1,500
Hampton Institute, Hampton, Va. (special appropriation)	1,000
Harkshorn Memorial Institute, Richmond, Va	650
Jackson College, Jackson, Miss	800
Jacksonville Graded School, Jacksonville, Fla	800
Leonard Medical School, Raleigh, N. C.	500
Le Moyne Institute, Memphis, Tenn	1,300
Livingstone College, Salisbury, N. C	700
Meharry Medical College, Nashville, Tenn	1,000
Mount Hermon Female Institute, Clinton, Miss	$1,000
New Orleans University, New Orleans, La	1,000
Paul Quinn College, Waco, Tex	460
Payne Institute, Augusta, Ga	600
Philander Smith College, Little Rock, Ark	800
Roger Williams University, Nashville, Tenn	1,000
Rust University, Holly Springs, Miss	1,100
Schofield Normal Institute, Aiken, S. C	500
Scotia Female Seminary, Concord, N. C	700
Shaw University, Raleigh, N. C	1,800
Spelman Female Seminary, Atlanta, Ga	2,000
State Normal School, Montgomery, Ala	1,000
State Normal School, Tuskegee, Ala	1,000
Straight University, New Orleans, La	1,300
Talladega College, Talladega, Ala	1,400
Tillotson Institute, Austin, Tex	900
Tougaloo University, Tougaloo, Miss	1,500
Training School, Knoxville, Tenn	600
To special objects	500
Total	42,910

The sum of $47,428.27 was received from the income of the Daniel Hand fund, and was used in extending aid to deserving and promising students, in providing good school buildings at different places, and in securing teachers for places where they could not otherwise be obtained.

The Daniel Hand fund at the time it was granted consisted of interest-bearing securities to the amount of $1,000,894.25. It was placed in charge of the American Missionary Association, and only the income of it is to be used. The bonds and property are "to be received and held by said American Missionary Association *upon trust*, and for the following purposes, viz: To safely manage the said trust fund, to change investments whenever said association may deem it necessary or advisable, to reinvest the principal of said trust fund in such securities, property, and investments as said association may deem best, and to use the income thereof only for the education of colored people of African descent residing in the recent slave States of the United States of America hereinbefore specified.

"Such income to be applied for the education of such colored people as are needy and indigent, and such as by their health, strength, and vigor of body and mind give indications of efficiency and usefulness in after life."

In December, 1891, at his home in Guilford, Conn., occurred the death of Mr. Daniel Hand, the donator of the above fund, who with intelligent foresight gave from the living hand that which probably for years to come will confer its benefits upon deserving youth.[1]

[1] "Daniel Hand was born in Madison, Conn., July 16, 1801, and was therefore in the eighty-eighth year of his age when he made his gift for the education of the colored people at the South. His ancestors resided in that town for several generations, and were always landholders, industrious, quiet, and respectable. To this ancestry Mr. Hand is probably indebted under God for his physical vigor, long life, strength of character, and success in business. He was the fourth son of seven, and was on the farm under his father's direction until he was 16 years of age, when he was put in charge of his second brother, Augustus F. Hand, who was then a merchant at Augusta, Ga., and whom he succeeded in business. In 1854 Mr. Hand went to New York in connection with his Southern business, and remained there in that capacity until the beginning of the war in 1861. He resided in some portion of the Southern Confederacy during the entire war, and was never treated with violence in any way, and no Confederate officer ever offered him indignity or even an unkind word.

"Mr. George W. Williams, a native Georgian, was, at about the age of 16, employed by Mr. Hand as a clerk in Augusta, and in a few years was taken in as partner. Mr. Williams suggested a branch of the business in Charleston, and conducted it successfully. When the war came on Mr. Hand's capital was largely engaged in the Charleston business, which Mr. Williams, as a Southern man, continued, having the use of Mr. Hand's capital, which the Confederate government vainly endeavored to confiscate by legal proceedings against Mr. Hand as a Northern man of pronounced antislavery sentiments. After the war Mr. Hand came North and left it to his old partner, Mr. Williams, to adjust the business and make up the accounts, allowing him almost unlimited time for so doing. When this was accomplished Mr. Williams came North and paid over to Mr. Hand his portion of the long-invested capital and its accumulations.

"Mr. Hand, having been early deprived by death of wife and children, decided to devote a share of his large fortune to benevolent purposes. At one time he intended to make bequests to some Northern colleges, but at length, recalling the fact that his property was accumulated in the South, and knowing so well the needs of the ignorant negroes, he turned his attention to them.

"The well-known and magnificent gift of $1,000,894.25, October 24, 1888, to the American Missionary Association, for the benefit of the colored people of the Southern States, was the result."

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George R. Smith College, Sedalia, Mo.—On March 27, 1888, two daughters of Gen. George R. Smith, Madams Smith and Cotton, donated 25 acres of land, valued at $25,000, in Sedalia, Mo., for the establishment of an institution of learning for the colored race, on condition that a $25,000 building should be erected on it by January 1, 1892. The building was partially erected within the required time, but the donors kindly extended the time to January 1, 1894. As the institution is to be in charge of the Freedmen's Aid and Southern Education Society of the M. E. Church, it will very probably be completed within the required time. It will be the first institution of higher grade in Missouri for colored people.

INDUSTRIAL TRAINING.

In nearly all, if not all, of the institutions for the secondary and higher education of the colored race of the South industrial training forms a very important part. It is one of the conditions required before aid can be received from the John F. Slater fund. The cost of its introduction was very considerable, in the purchase of sufficient grounds, in the erection of suitable buildings, and securing the necessary machinery and apparatus for the different kinds of work. And not only was its introduction expensive, but its maintenance as well, for it has not been the purpose to make profits, or even in many cases to meet expenses, but to impart the largest amount of useful and practical knowledge and to train in habits of carefulness, diligence, and order. But at the same time many indigent students were instructed in branches of industry by which they were soon able to contribute largely towards defraying their expenses, and afterwards to earn a good livelihood. It was found, too, that the physical exercise and the temporary mental diversion from studies was very conducive to health and vigor and was a source of enjoyment to students, while it in no way hindered progress in their studies. It also indicated that hard labor on the farm or in the workshop was not to be confined to the ignorant, poverty-stricken wretch, but that there was nothing in it inconsistent with an educated, progressive, Christian character.

As to industrial training, Dr. A. G. Haygood, general agent of the Slater fund, says: "The essential goodness of industrial training in connection with the ordinary school training is now universally admitted by experienced and practical people. In the schools aided by the Slater fund during the school year 1889–90 as many as ten thousand young people were taught in books and in some branch of useful industries. This sort of training is vital now. Mere book schooling with poor and illiterate people breeds wants faster than it develops the ability to provide for them. The outcome is misery. Tool-craft helps to realize the aspirations that book learning inspires."

TABLE 4.—*Amount and distribution of the sums disbursed from the Slater fund, from 1883 to 1891, inclusive.*

States.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	Total.
Alabama	$2,100	$2,450	$5,000	$3,800	$4,400	$4,600	$3,600	$3,600	$4,900	$34,450
Arkansas	.....	.....	.....	.....	600	800	800	800	1,000	4,000
Florida	.....	.....	.....	.....	.....	1,000	800	800	1,000	3,600
Georgia	6,200	500	6,814	5,100	6,200	6,850	9,700	9,700	10,500	61,564
Kentucky	.....	1,000	1,000	700	700	700	.....	.....	.....	4,100
Louisiana	.....	592	1,400	1,000	3,100	3,500	4,100	3,100	3,700	20,492
Mississippi	1,000	2,600	2,000	2,000	4,450	4,800	4,400	4,400	5,300	30,950
North Carolina	2,000	740	4,400	3,600	4,200	5,300	5,100	4,700	5,700	35,740
South Carolina	2,000	750	3,500	2,700	3,660	4,300	4,000	4,000	5,000	29,910
Tennessee	950	4,325	7,600	5,800	6,500	6,500	6,800	6,800	7,400	52,675
Texas	.....	600	600	600	900	1,360	1,360	1,360	1,500	8,280
Virginia	2,000	2,000	3,000	3,650	4,190	4,190	3,150	3,150	3,150	28,480
District of Columbia	.....	1,000	1,000	600	600	600	.....	.....	.....	3,800
Special	.....	550	450	450	500	500	500	500	500	3,950
Totals	16,250	17,107	36,764	30,000	40,000	45,000	44,310	42,910	49,650	321,991

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TABLE 5.—*Distribution of money derived from Daniel Hand fund in 1889-90.*

Alabama:		
Student aid	$2,592.85	
Teachers	4,100.55	
Buildings	728.21	
		$7,421.61
Florida:		
Teachers		1,037.66
Georgia:		
Student aid	2,116.44	
Buildings	7,154.62	
		9,271.06
Kentucky:		
Student aid	86.95	
Teachers	1,258.58	
		1,345.53
Louisiana:		
Student aid	2,000.00	
Building	5,460.44	
		7,460.44
Mississippi:		
Student aid	$2,100.00	
Teachers	1,088.20	
Buildings	1,500.00	
		$4,688.20
North Carolina:		
Student aid	772.00	
Teachers	3,564.44	
Buildings	400.00	
		4,736.44
South Carolina:		
Student aid	115.00	
Building	7,719.91	
		7,834.91
Tennessee:		
Student aid	2,068.67	
Teachers	1,173.75	
		3,232.42
Virginia:		
Teacher		400.00
Total		47,428.27

TABLE 6.—*Statistics of institutions for the instruction of the colored race, for 1889-90.*

Location.	Name.	Religious denomination.	Instructors.	Students.
	NORMAL SCHOOLS.			
Huntsville, Ala	Central Alabama Academy	M. E	5	126
Do	State Colored Normal and Industrial School	Nonsect	5	80
Mobile, Ala	Emerson Institute*	Cong	10	280
Montgomery, Ala	State Normal School for Colored Students	Nonsect	a18	a336
Talladega, Ala	Normal Department of Talladega College*	Cong		35
Tuskegee, Ala	Tuskegee Normal and Industrial Institute	Nonsect	15	225
Little Rock, Ark	Normal Department of Philander Smith College.	M. E		13
Pine Bluff, Ark	Branch Normal College of Arkansas Industrial University.	Nonsect	4	176
Washington, D. C	Miner Normal School	Nonsect	5	40
Do	Normal Department of Howard University	Nonsect	14	136
Tallahassee, Fla	State Normal College for Colored Teachers	Nonsect	3	10
Atlanta, Ga	Normal Department of Atlanta University	Nonsect		81
Augusta, Ga	The Paine Institute	M. E. So	6	50
New Orleans, La	Normal Department of New Orleans University.	M. E		36
Do	Normal Department of Straight University	Nonsect		59
Holly Springs, Miss	Mississippi State Colored Normal School	Nonsect	3	75
Jackson, Miss	Jackson College	Bapt	8	263
Tougaloo, Miss	Normal Department of Tougaloo University	Cong	3	33
Ashboro, N. C	Ashboro Normal School	Friends	2	96
Fayetteville, N. C	State Colored Normal School	Nonsect	3	140
Franklinton, N. C	do	Nonsect		137
Goldsboro, N. C	do	Nonsect	4	115
Plymouth, N. C	do	Nonsect	3	47
Salisbury, N. C	do	Nonsect	4	119
Do	Normal Department of Livingstone College	A. M. E. Z	5	33
Aiken, S. C	Schofield Normal and Industrial School		8	185
Charleston, S. C	Avery Normal Institute	Cong	7	220
Greenwood, S. C	Brewer Normal School	Cong	6	360
Knoxville, Tenn	Training School of Knoxville College	Nonsect	12	37
Memphis, Tenn	Le Moyne Normal Institute	Cong	5	155
Morristown, Tenn	Morristown Normal Academy	M. E	12	201
Nashville, Tenn	Normal Department of Central Tennessee College.	M. E		21
Do	Normal Department of Fisk University	Cong	8	37
Do	Normal Department of Roger Williams University.	Bapt	6	221
Austin, Tex	Tillotson Collegiate and Normal Institute	Cong	8	198
Hempstead, Tex	Prairie View State Normal School	Nonsect	5	138
Hampton, Va	Hampton Normal and Agricultural Institute.	Cong	40	550
Petersburg, Va	Virginia Normal and Collegiate Institute	Nonsect	11	320
Harper's Ferry, W. Va	Storer College	Nonsect	8	176
	Colored normal students in various Northern schools.			144
	Total		256	6,201

* In 1888-89.
a In all the departments.

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TABLE 6.—*Statistics of institutions for the instruction of the colored race, for 1889-90*—Continued.

Location.	Name.	Religious denomination.	Instructors.	Students
	INSTITUTIONS FOR SECONDARY INSTRUCTION.			
Athens, Ala	Trinity School	Cong	5	40
Prattville, Ala	Prattville Male and Female Academy	Nonsect	3	44
Selma, Ala	Preparatory Department of Selma University.	Bapt	5	500
Talladega, Ala	Talladega College	Cong	2	83
Little Rock, Ark	Preparatory Department of Philander Smith College.	M. E	2	28
Washington, D. C	Preparatory Department of Howard University.	Nonsect	5	40
Jacksonville, Fla	Cookman Institute	M. E	7	100
Key West, Fla	Convent of Mary Immaculate	Cath	3	60
Live Oak, Fla	Florida Institute	Bapt	5	118
Athens, Ga	Jewel Normal School		2	90
Do	Knox Institute		1	20
Do	Pierce Chapel*		1	77
Atlanta, Ga	Atlanta Baptist Seminary	Bapt	2	56
Do	Preparatory Department of Atlanta University.	Nonsect	21	436
Do	Preparatory Department of Clark University.	M. E	8	430
Do	Spelman Seminary	Bapt	12	288
Cave Spring, Ga	Mercer Female Seminary*	Bapt	1	25
La Grange, Ga	La Grange Academy		3	229
Macon, Ga	Ballard Normal School		13	584
Thomasville, Ga	Industrial Institute	Cong	9	266
Waynesboro, Ga	Haven Academy		2	177
Berea, Ky	Preparatory Department of Berea College	Nonsect	10	324
Lexington, Ky	Lexington Colored Normal School*	Cong	7	300
New Castle, Ky	Christian Bible School	Christ	1	27
Williamsburg, Ky	Williamsburg Colored Academy*	Cong	7	307
Alexandria, La	Alexandria Academy		3	150
New Iberia, La	Mount Carmel Convent		1	15
New Orleans, La	La Harpe Academy		2	89
Do	Preparatory Department of Leland University.	Bapt	6	328
Do	Preparatory Department of New Orleans University.	M. E	12	380
Do	Preparatory Department of Southern University.	Nonsect	9	407
Do	Preparatory Department of Straight University.	Cong	16	545
Winsted, La	Gilbert Academy	M. E	14	370
Baltimore, Md	Morgan College	M. E	10	151
Clinton, Miss	Mt. Hermon Female Seminary	Nonsect	2	20
Holly Springs, Miss	Preparatory Department of Rust University	M. E	10	225
Meridian, Miss	Meridian Academy	M. E	2	95
Tougaloo, Miss	Tougaloo University		13	352
Beaufort, N. C	Washburn Seminary	Cong	4	218
Blowing Rock, N. C	Colored Academy	Cong		107
Charlotte, N. C	Preparatory Department of Biddle University.	Presb	4	105
Concord, N. C	Scotia Seminary	Presb	4	112
Greensboro, N. C	Bennett Seminary	M. E	6	172
Raleigh, N. C	Preparatory Department of Shaw University	Bapt		42
Salisbury, N. C	Preparatory Department of Livingston University.	A. M. E. Z	4	174
Winton, N. C	Chowan Academy	Bapt	1	42
South New Lime, Ohio	New Lime Institute		7	161
Wilberforce, Ohio	Preparatory Department of Wilberforce University.	A. M. E	9	109
Lincoln University, Pa.	Preparatory Department of Lincoln University.	Presb	4	77
Oxford, Pa	Oxford Academy	Nonsect	3	62
Charleston, S. C	Wallingford Academy	Presb	2	51
Chester S. C	Brainerd Institute		11	383
Columbia, S. C	Benedict Institute	Bapt	7	203
Do	Preparatory Department of Allen University.	A. M. E	4	272
Frogmore, S. C	Penn Industrial and Normal School	Nonsect	2	36
Orangeburg, S. C	Preparatory Department of Claflin University.	M. E	9	131
Bells, Tenn	Bells Male and Female Academy	Nonsect	2	52
Knoxville, Tenn	Knoxville College	U. Presb	12	54
Mason, Tenn	West Tennessee Preparatory School*	M. E	3	149
Morristown, Tenn	Morristown Seminary and Normal Institute	M. E	7	286

*In 1888-89.

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TABLE 6.—*Statistics of institutions for the instruction of the colored race, for 1889-'90*—Continued.

Location.	Name.	Religious denomination.	Instructors.	Students.
	INSTITUTIONS FOR SECONDARY INSTRUCTION—continued.			
Nashville, Tenn	Preparatory Department of Central Tennessee College.	M. E	4	43
Do	Preparatory Department of Fisk University	Cong	14	400
Do	Preparatory Department of Roger Williams University.	Bapt	8	185
Hearne, Tex	Hearne Academy	Bapt	2	11
Marshall, Tex	Bishop College	Bapt	4	25
Do	Wiley University	M. E	9	292
Waco, Tex	Paul Quinn College	A. M. E	13	185
Walnut, Tex	Central College	Nonsect	5	83
Norfolk, Va	Norfolk Mission School	U. Presb	5	160
Richmond, Va	Moore Street Industrial School		4	95
Do	Hartshorn Memorial College	Bapt	5	86
	Colored pupils attending various other secondary schools.			82
	Total		415	12,420
	UNIVERSITIES AND COLLEGES. *a*			
Selma, Ala	Selma University	Bapt	5	9
Little Rock, Ark	Philander Smith College	M. E	3	12
Washington, D. C	Howard University	Nonsect	6	22
Atlanta, Ga	Atlanta University	Nonsect	7	18
Do	Clark University	M. E	5	7
Berea, Ky	Berea College	Nonsect	9	33
New Orleans, La	Leland University	Bapt	7	21
Do	New Orleans University	M. E	4	7
Do	Southern University	Nonsect	3	7
Do	Straight University	Cong	5	3
Holly Springs, Miss	Rust University	M. E	4	40
Rodney, Miss	Alcorn Agricultural and Mechanical College.	Nonsect	7	62
Charlotte, N. C	Biddle University	Presb	9	45
Raleigh, N. C	Shaw University	Bapt	4	42
Salisbury, N. C	Livingstone College	A. M. E	4	20
Wilberforce, Ohio	Wilberforce University	A. M. E	6	7
Lincoln University, Pa.	Lincoln University	Presb	10	96
Columbia, S. C	Allen University	A. M. E	4	14
Orangeburg, S. C	Claflin University	M. E	6	16
Nashville, Tenn	Central Tennessee College	M. E	2	9
Do	Fisk University	Cong	7	49
Do	Roger Williams University	Bapt	5	34
	Colored students attending various Northern universities and colleges.			238
	Total		*b*122	811
	SCHOOLS OF THEOLOGY.			
Selma, Ala	Theological Department of Selma University.	Bapt	4	25
Talladega, Ala	Theological Department of Talladega College.	Cong	1	10
Tuscaloosa, Ala	Institute for Training Colored Ministers	Presb	2	29
Little Rock, Ark	Theological Department of Philander Smith College.	M. E	3	20
Washington, D. C	Theological Department of Howard University.	Nonsect	7	40
Do	Wayland Seminary	Bapt	3	40
Atlanta, Ga	Atlanta Seminary	Bapt	3	47
Do	Gammon Theological Seminary	M. E	4	75
New Orleans, La	Gilbert Haven School of Theology (New Orleans University).	M. E	3	17
Do	Theological Department of Leland University.	Bapt	2	20
Do	Theological Department of Straight University.	Cong	2	19
Holly Springs, Miss	Theological Department of Rust University	M. E	4	26
Charlotte, N. C	Theological Department of Biddle University.	Presb	3	9
Raleigh, N. C	Theological Department of St. Augustine's Normal School.	P. E	2	12
Do	Theological Department of Shaw University.	Bapt	2	50

a Students in preparatory departments are not included here. See Secondary schools.
b Many of these gave instruction to students in the preparatory departments also.

TABLE 6.—*Statistics of institutions for the instruction of the colored race, for 1889–90*—Continued.

Location.	Name.	Religious denomination.	Instructors.	Students.
	SCHOOLS OF THEOLOGY—continued.			
Wilberforce, Ohio	Theological Department of Wilberforce University.	A. M. E	4	18
Lincoln University, Pa.	Theological Department of Lincoln University.	Presb	7	25
Columbia, S. C	Benedict Institute	Bapt	1	43
Do	Theological Department of Allen University	A. M. E	3	10
Orangeburg, S. C	Parker Theological Institute	M. E	2	16
Nashville, Tenn	Theological Department of Central Tennessee College.	M. E	2	27
Do	Theological Department of Fisk University	Cong	1	14
Do	Theological Department of Roger Williams University.	Bapt	2	32
Richmond, Va	Richmond Theological Seminary	Bapt	4	64
	Colored students in theological schools designed for whites.			46
	Total		71	734
	SCHOOLS OF LAW.			
Washington, D. C	Law Department of Howard University		5	29
Raleigh, N. C	Law Department of Shaw University		1	8
Wilberforce, O	Law Department of Wilberforce University		2	3
Columbia, S. C	Law Department of Allen University		1	9
Nashville, Tenn	Law Department of Central Tennessee College.		2	8
	Colored students attending law schools designed for whites.			6
	Total		11	63
	SCHOOLS OF MEDICINE, DENTISTRY, AND PHARMACY.			
Washington, D. C	Howard University:			
	Medical Department		16	107
	Pharmaceutical Department			5
	Dental Department			9
New Orleans, La	Medical Department of New Orleans University.		4	11
Raleigh, N. C	Leonard Medical College, of Shaw University.		7	44
Nashville, Tenn	Central Tennessee College:			
	Meharry Medical Department		14	59
	Dental Department		7	7
	Pharmaceutical Department		4	5
	Colored students attending schools designed for whites.			63
	Total		52	310
	SCHOOLS FOR THE DEAF AND DUMB AND THE BLIND.			
Little Rock, Ark	Arkansas School for the Blind (colored department).		a15	15
Do	Arkansas Institute for Deaf Mutes			7
St. Augustine, Fla	Florida Institute for the Deaf and the Blind		a2	11
Cave Spring, Ga	Georgia Institute for the Deaf and Dumb (colored department).		a6	33
Macon, Ga	Georgia Academy for the Blind (colored department).		a10	17
Danville, Ky	Kentucky Institution for the Education of Deaf Mutes (colored department).		a17	37
Louisville, Ky	Kentucky Institution for the Education of the Blind (colored department).		a9	26
Baltimore, Md	Maryland School for Colored Blind and Deaf Mutes.		5	48
Jackson, Miss	Institution for Education of the Deaf (colored department).		a8	18
Raleigh, N. C	North Carolina Institution for the Deaf and Dumb and the Blind (colored department).		a10	56
Cedar Spring, S. C	South Carolina Institution for the Education of the Deaf and Dumb and the Blind (colored department).		a5	23
Knoxville, Tenn	Tennessee School for the Deaf and Dumb (colored department).		a10	22

a Instructors in both white and colored departments.

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TABLE 6.—*Statistics of institutions for the instruction of the colored race, 1889-90*—Continued.

Location.	Name.	Religious denomination.	Instructors.	Students.
	SCHOOLS FOR THE DEAF AND DUMB AND THE BLIND—continued.			
Nashville, Tenn.	Tennessee School for the Blind (colored department).		a10	14
Austin, Tex.	Institution for Deaf and Dumb and Blind Colored Youth.		2	65
	Colored students in various institutions designed for whites.			96
	Total		109	488

a Instructors in both white and colored departments.

TABLE 7.—*Summary of statistics of institutions for the instruction of the colored race, for 1889-90.*

States.	Enrollment in common schools.	Normal schools.			Institutions for secondary instruction.		
		Schools.	Teachers.	Pupils.	Schools.	Teachers.	Pupils.
Alabama	115,490	6	53	1,600	4	15	617
Arkansas	59,468	2	4	189	1	2	28
Delaware	4,656						
District of Columbia	13,332	2	19	176	1	5	40
Florida	37,281	1	3	10	3	15	278
Georgia	150,702	2	6	131	12	75	2,678
Kentucky	54,716				4	25	968
Louisiana	a48,137	2		95	8	63	2,293
Maryland	36,372				1	10	151
Mississippi	176,541	3	14	371	4	27	701
Missouri	82,804						
North Carolina	116,689	7	21	677	8	23	1,002
Ohio					2	16	270
Pennsylvania					2	7	140
South Carolina	111,888	3	21	745	6	35	1,076
Tennessee	99,009	6	43	672	7	50	1,169
Texas	104,471	2	13	336	5	33	596
Virginia	122,059	2	51	879	3	14	341
West Virginia	6,329	1	8	176			
Other States				144			82
Total	1,289,944	39	253	6,201	71	415	12,420

a In 1889.

TABLE 8.—*Summary of statistics of institutions for the instruction of the colored race, for 1889-90.*

States.	Universities and colleges.			Schools of theology.			Schools of law.		
	Schools.	Teachers.	Pupils.	Schools.	Teachers.	Pupils.	Schools.	Teachers.	Pupils.
Alabama	1	5	9	3	7	64			
Arkansas	1	3	12	1	3	20			
District of Columbia	1	6	22	2	10	80	1	5	29
Georgia	2	12	25	2	7	122			
Kentucky	1	9	33						
Louisiana	4	19	38	3	7	56			
Mississippi	2	11	102	1	4	26			
North Carolina	3	17	107	3	7	71	1	1	8
Ohio	1	6	7	1	4	18	1	2	3
Pennsylvania	1	10	96	1	7	25			
South Carolina	2	10	30	3	6	69	1	1	9
Tennessee	3	14	92	3	5	73	1	2	8
Virginia				1	4	64			
Other States			238			46			6
Total	22	130	811	24	71	734	5	11	63

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TABLE 9.—*Summary of statistics of institutions for the instruction of the colored race, for 1889–90.*

States.	Schools of medicine.			Schools for the deaf and dumb and the blind.		
	Schools.	Teachers.	Pupils.	Schools.	Teachers.	Pupils.
Arkansas				2	15	22
District of Columbia	1	16	121			
Florida				1	2	11
Georgia				2	16	50
Kentucky				2	26	63
Louisiana	1	4	11			
Maryland				1	5	48
Mississippi				1	8	18
North Carolina	1	7	44	1	10	56
South Carolina				1	5	23
Tennessee	1	25	71	2	20	36
Texas				1	2	65
Other States			63			96
Total	4	52	310	14	109	488

TABLE 10.—*Number of schools for the colored race and enrollment in them by institutions without reference to States.*

Class of institutions.	Schools.	Enrollment.
Public schools		1,239,944
Normal schools	39	6,201
Institutions for secondary instruction	71	12,420
Universities and colleges	22	811
Schools of theology	24	734
Schools of law	5	63
Schools of medicine	4	310
Schools for the deaf and dumb and the blind	14	488
Total	179	1,310,971

NEED OF GREATER ACCOMMODATIONS.

The number of students in the colleges and schools for secondary instruction of the colored race does not show the rapid increase from year to year which would naturally be expected, when we consider the large number of children that have been attending the common schools, many of whom should now be qualified for entering higher institutions. But an examination of the reports of colored schools and of journals devoted to colored education soon discloses one reason why there is not the increase expected, viz, the want of accommodations for more students. Many of the colored schools of higher grade are already badly overcrowded; some of them are so crowded as to seriously endanger the health of the students and hundreds of others have been refused admission on account of want of room, while others still have not applied because they already knew there was no place for them. Very few new schools of the higher grades are established for colored students, as the colored people themselves have not the means for doing so, and the missionary societies generally content themselves with sustaining or at least strengthening the institutions they have already established. Many of the schools adopt all sorts of expedients to make room for applicants begging for admission, allowing them to sleep on cots in the halls, making use of old buildings which had been discarded as no longer fit for occupancy, and very generally crowding the students in excessive numbers in the buildings designed for them. Judging from the accounts given it would seem reasonable to suppose that the number of colored students would be largely increased immediately if there were accommodations for them. A want of accommodations is especially to be regretted when it is considered how anxious the young men and women are to receive an education and what sacrifices both students and parents willingly make in order that they may receive one.

A few quotations on this subject are given from various sources. Dr. C. H. Parkhurst, editor of Zion's Herald, says: "We should have ten schools where

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we now have one. Every institution is crowded to overflowing. If God is saying anything in this jubilee hour to the church it is, *enlarge, enlarge, enlarge* your beneficence; enlarge the scope of operation; enlarge the teaching and boarding capability. We rejoice over the achievements of these twenty-five years; but at the same time we are humbled that the church has done so little."

Morristown Normal Academy, Tennessee; number of students, 306.—"This institution is situated in the midst of a colored population of not less than 250,000. To meet the educational requirements of this vast number of people, there is only one other school of a similar grade within a radius of 300 miles. The people are realizing, as never before, their great need of an education, and are crowding every room to its utmost capacity. Last year scores of bright, earnest, and self-sacrificing young people were sent away for want of room."

"The present dormitory is entirely too small for the number of students crowded into it. For the last two years we have been compelled to put three students in each bed, and to place cots in the halls. Even then it was difficult to satisfy applicants that we were crowded and could not accommodate them."

Grand View, Tenn.—"The classes are full and the accommodations inadequate. The school numbers one hundred and eleven. It is necessary to crowd four boys into each room of the boys' hall. Four boys are boarding themselves in a shackly log building at the foot of the hill. Their grit is admirable."

Tougaloo, Miss.—"Both the dormitories are crowded. The ladies' hall is supposed to accommodate 75 girls. One hundred and six are crowded into it to-day. We have turned away nearly one hundred more because we had not room for them. Every indication is that the crowd of applicants will be greater next year than ever. Already applications are coming in."

Meridian, Miss.—"The work of the school is hindered by lack of room. We have enrolled this year 232 pupils, and many have been turned off because we could not seat them. We opened in December of 1888 with 28 pupils. A school for more advanced pupils is needed in this part of Mississippi. We have 30 young people in school who come from the five adjoining counties."

Straight University,[1] *New Orleans.*—"It has been a golden year for Straight University. Financially it has been our best year. A larger proportion of students able to pay came to us. We want to grow, and have every opportunity to do so save that our quarters are too small. We have turned away during the year probably 200 applicants, many of them for the boarding department. We have had to put cots in nearly all the rooms, packing them too full for comfort, as it was very hard to say No to young people who came hundreds of miles and begged tearfully for admission. The school has grown during the last eight years from 200 to 600 and is not 1,000 only because we had no room for them. Our graduates are filling important positions all over the South. Several are superintendents in Texas, Kansas, Mississippi, and Louisiana. One holds an important office in Honduras; others are doing good work in Cuba and Mexico. Eight are filling important positions in this city. We have no trouble in getting positions for our young people. Indeed, we can not supply as fast as demanded. Often as many as twenty are called for when we have none to send."

Bennett College, Greensboro, N. C.—"Our chief need is a new dormitory building. The present building, though large, is far too small for the increasing demands upon us for more commodious quarters. Students are pouring in upon us every day, and still we hear of others coming."

Wiley University, Marshall, Tex.—"There should be at once erected a large central building, which would be at once filled with students."

Gilbert Academy, Winsted, La.—"We could have an attendance of a thousand students within a year if we had buildings to accommodate them."

Central Tennessee College.—"The attendance during the past year (1889–90) is such as to encourage the thought that the desire for education, and that more advanced, is growing rather than diminishing among the colored people. The number in attendance during the past year has tested our buildings to their utmost capacity. We need additional accommodations. This educational work has really just begun, and the outlook is that all our schools will be crowded more and more. We need a new chapel. Our present one is not sufficiently large to seat our students. We have been compelled to fill up the platform and crowd every seat, and yet have not room for all our students. We need a larger chapel for our ordinary purposes, and a much larger one for our public occasions."

[1] In January, 1892, the main building of Straight University, New Orleans, La., was consumed by fire. Fortunately, however, the property was adequately insured, and a larger structure is now being erected in its stead.

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"For our young women we need dormitories; and for the purpose of teaching, cooking, nursing, domestic economy, we need enlarged facilities. We need these, not for our necessary school purposes only, but to create a desire for neatness and pleasant surroundings in the homes that these young women are to make in the future. The need of additional buildings is more especially evident when it is understood that every room on the grounds is occupied by students or teachers."

From the Daniel Hand School, New Orleans.—It is the old story—200 turned away for lack of room. A few have come from the country without ever thinking that they might not find a place, and stand hopelessly on the street corner talking it over.

Another teacher says: "We are crowded to overflowing in every grade of the school but one, in which we have three unoccupied seats. In the normal department twenty pupils are without desks. Yesterday one of the ministers of the city applied for admission of his two daughters, who had completed the course in the public schools—just the class of pupils we like to have come—but I could not admit them for want of room."

From report of President T. D. Tucker, of Florida State Normal College for Colored Students.—"The surest test of the appreciation of the race for the school is in the sacrifices made by patrons in sending and maintaining scholars here and the eagerness of the latter to avail themselves of the opportunity offered them for instruction. With limited means or from daily earnings parents send their children to this school from distant parts of the State, and meet all the financial engagements incident to the education of a young person during the entire session of nine months. Although this is the second year since the school has had dormitory halls, not only has every patron met all his obligations, but the demand for more room in the dormitories is restricted by our inability to provide for any more newcomers.

"The promptness and regularity of attendance at the daily sessions of the school is another proof of high appreciation. No severer punishment for breach of discipline can be inflicted on any of them than to be ordered to leave school for even part of a day. They seem to feel that every day and hour are too precious to be lost from the prosecution of the purpose for which they have come hither from their homes. This strong regard and attachment for a school but lately established is one of the most pleasing features, which promise for it, let it be hoped, a long career of usefulness. * * * Wherever the services of our undergraduates have been once had, there they are held most in demand—a testimonial to their efficiency and the need of them as workers in the common schools."

From report of the American Missionary Association committee in 1891.—"The total number under instruction during the year has increased by several hundred, and almost every school is crowded to overflowing, compelling in many cases the sad necessity of sending away great numbers of applicants from lack of room for their accommodation. It is evident that the thirst of the colored people for knowledge, shown so remarkably from the moment of their emancipation, has not diminished, but is constantly increasing."

INDUSTRIAL TRAINING.

At *Claflin University, South Carolina*, a large number of students were instructed in trades and industries; in agriculture, including gardening and horticulture, 40 students; in architectural drawing, 13; in art needlework, 20; in blacksmithing, 98; in brickmaking, bricklaying, plastering, and frescoing, 92; in carpentry and cabinetmaking, 185; in cooking, 35; crocheting and lacemaking, 120; domestic economy, 13; dressmaking, 36; mechanical engineering, 15; merchandising, 1; nurse-training, 14; painting, graining, and glazing, 81; printing, 69; steam laundrying, 50; steam planing, sawing, turning, 26; steam milling, grinding cereals, 4; shoemaking, 21; plain sewing, 190.

President L. M. Dunton, of Claflin University, says: "In the past the negro has been a laborer. For years to come he must be a laborer. A few of course will be educated and will enter the ministry, the law, the medical profession; but the vast majority must labor with their hands. It is therefore very important to give them this manual training. We are very enthusiastic about this, and we do not allow any young woman to graduate until she can measure, cut, fit, and make a dress, and make it in style. They also learn cooking and artistic needlework. The young men are required to learn the principles of different trades, and to learn one trade thoroughly. We require a certificate from some

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one of the industrial departments that they have accomplished the required work before they can graduate from the institution. During the vacations these young men and women work at these trades that they have learned at the institution. We have boys now earning a dollar and a half a day at house painting, others earning $2 a day laying brick or at carpentry. In our blacksmith department they make all the tools they use; they even make their own razors. This industrial feature has been an inspiration to the literary department."

At *Gilbert Academy, Winsted, La.*, there are 12 students in the printing office, 14 in the carpenter shop, 16 on the farm, 53 girls in the sewing room, 3 in the bakery, besides a large number in the laundry.

Philander Smith College, Little Rock, Ark.—"The industrial department is carried on in a two-story frame building erected by the students. In this department there are 114. The citizens of Little Rock have given over $800 towards paying for the building. A large number of young men have been taught the use of tools. In the printing department several young men and young ladies have been taught."

Rust University, Mississippi.—In the carpenter shop 35 young men were instructed in the use of tools and methods of construction, from the most common articles in use in home and on farm to fine cabinet work. Twenty-seven were taught shoemaking, from the making of cheap shoes to the finest French kid boot. Eleven were instructed in the printing office, and a monthly paper was published. The young men below the college course, who were not assigned to some trade, were put in the department of agriculture. In the sewing department 102 girls received useful instruction in that line.

Clark University, Atlanta, Ga.—"At Clark University we have one of the best located as well as one of the best equipped industrial schools south of the Ohio. We have one large brick building, Ballard Hall, 100 by 40 feet. The first floor is divided into two parts: one-half is occupied by the wheelwright shop. The second floor is divided into four rooms, one occupied by the printing office, one by the varnish and finishing department, another by the harness and trimming shop, while the remaining one is devoted to an office and mechanical drafting. The machinery is driven by a 30 horse-power engine. We have a blacksmith shop 40 by 30 feet, brick, three forges, drills, benches, etc. We have a foundry, 60 by 40 feet, supplied with the latest improved cupola.

"The Woman's Home Missionary Society has a building worth $6,000, built after the best models and thoroughly equipped with appliances for teaching in the culinary department, needlework, dressmaking, and all that a wife in a well-regulated home ought to know. The university physician has a class in nurse-training in this home also. A shoe shop and a machine shop are among the things now under contemplation."

Central Tennessee College.—"On October 15, 1890, the mechanic arts shop was dedicated to the training of young men for useful work in wood, iron, brass, and steel; in the manufacture of steam engines, scientific, and philosophical apparatus. Rev. H. G. Sedgwick, M. S., who is a genius himself in mechanics and can readily impart instruction to others, has during the year had excellent work done by students in wood-turning, shaping and planing, castings, steel, and brass. One engine has been built and considerable repair work done. This is the best shop, and the only one of the kind, open to colored youth in this country."

Dr. Atticus G. Haygood, general agent of the Slater fund, says: "It has been demonstrated that an hour or two a day in the workshop or the sewing room does not hinder in the least education in books. It has been found, as a rule, that the best men in the shop are the leaders in the class room. Experienced teachers say that industrial training fosters good discipline and the upbuilding of strong and reliable personal character. Outside the important fact that a great number have learned enough of the trades to pursue them profitably, it is certain that thousands have learned enough to be independent as citizens and far more capable as heads of families. That 'head, heart, and hand training' should go on together in these institutions is now the accepted doctrine in all quarters.

"It can not be doubted that the success of industrial training in the negro schools has had much to do with the development of opinion throughout the Southern States of the importance of this part of education in the white schools of the country."

Gen. S. C. Armstrong on industrial training.—"Labor is a great moral and educational force. Next to the grace of God, hard work, in its largest sense, is the most vital thing in Christian civilization. Subtract from any neighborhood,

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within a radius of ten miles, all industry, and in six months, in spite of churches and schools, what would become of order and decency? Look at the fairest civilization, and you will see that the worst lives are at the top and at the bottom—those who are too rich and those who are too worthless to work. Wherever you find industry you find character and morality.

"The main thing, then, in the industrial system is to open as widely and broadly as possible opportunities for agricultural, mechanical, and household industries, which shall provide negro students means to support themselves and to develop character. Character is the foundation. The training that our pupils get is an endowment. An able-bodied student represents a capital of perhaps a thousand dollars. We propose to treble that. When they learn a trade they are worth threefold more in the labor market. Last Saturday I gave my final words to our graduating class. I said to those 45 scholars, 'How many of you can go out into the world, and, if you can not get a school, how many can work in some line of industry and so support yourselves?' There was a roar. Every one said, 'I can,' and every one laughed. They go out into the world smiling at difficulties, happy in their pluck and purpose and skill.

"We are convinced that the negro needs physical as well as mental and Christian training. He needs the ten hours' drudgery which he gets in the shops to put him in shape for the struggle of life. He must go to his work with an appetite."

Rev. R. H. Allen, Concord, N. C.—"We have now a large boarding school for colored girls. If you ever save the negroes you must save the girls and women. You will not elevate any race until wives and mothers can teach the gospel in their families. You must save the daughters of the freedmen. They are to be the wives and mothers and home-makers of the future. At Concord you will see 234 girls in a seminary, with all the appliances for education and the industrial arts. They do the whole work of the school—all the washing, ironing, cooking, scrubbing, and dressmaking. We take a girl for $45 a year. We say to her, Go to work during the vacation and make $15 or $20 and we will help you to the balance of the $45. In such schools, by a practical education of the head, hand, and heart, the girls are all well prepared to take their part in life. We help them to make character."

Rev. Frank G. Woodworth, president Tougaloo University, Mississippi.—"The ordinary laborers on plantations do not often receive more than from 75 to 90 cents per day. I want to speak of the value of industrial education. Boys who come to us untrained, often able to earn only 75 cents a day, are sent out as carpenters, blacksmiths, or tinsmiths, able to earn from $1.25 to $2.50 a day. We are having that repeated constantly. That is the bread-and-butter view of industrial education, and it is worthy of mention. The mechanics who receive $2 a day do not live in a one-room cabin. They are getting to have good little homes of their own."

The higher education helps the elementary.—President Horace Bumstead, of Atlanta University: "It is a mistake to forget that the higher education of the few is contributing most efficiently to the elementary education of the many. What are the graduates of these higher institutions doing? Are they going out and enjoying their culture, and making a selfish use of it? Take Atlanta University. We have sent out, in the last 16 or 18 years, over 200 graduates from our collegiate and normal courses, two-thirds of whom are to-day engaged in teaching. They are doing this very work that we are reminded is the most important work to do—helping up the masses, educating the people. One must remember the relationship between the higher and the more elementary work. Where would these Southern States get their teachers for the colored public schools if it were not for these higher institutions?"

Colored teachers wanted.—President E. C. Mitchell, of Leland University, New Orleans: "More colored teachers must be educated. The appeals made to our institution to furnish teachers qualified for the higher work, or even the common work, are far beyond the power we have to meet. If we had four times as many graduates, we should not be able to meet the demand made upon us for teachers of the higher grade. All the institutions of the South must be carried on by colored teachers."

What kind of education the negro needs.—Dr. A. G. Haygood: "That many half-taught and unwisely-taught negroes 'go to the bad' and seek money by 'short cuts' is not surprising. In these matters the negro's weakness illustrates his brotherhood to his white neighbors. The prisons show enough half-educated white people to prove that merely learning the rudiments does not secure virtue.

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In all races it is true that with new knowledge new temptations come; strength to resist comes after, if at all. In all this a man of sense finds no argument against the education of the negro, but a demonstration of the need, for him and for the white race, of more and better education.

"'Better' is not the same as 'more;' the imminent need for the negro is to find out what education is now fittest for him. Nothing in these statements means the exclusion of the negro from the highest and widest studies of which some of them are capable; it does mean, as I see it, that the 'regulation college curriculum' is not what most negro students need. I would exclude, by arbitrary and prescriptive rules, no negro from whatever he can achieve, but I am persuaded that, in overlooking the hard facts of this case and in pressing the 'college' idea overmuch, there has been much waste of money, labor, time, opportunity.

"The educated negro man gravitates to the pulpit or the schoolroom. To the pulpit first, because here he may gratify, without hindrance, his inborn love of speaking. He is oratorical by instinct, and this race will more and more develop great orators. The educated negro woman goes to the schoolroom by preference, but she would rather be wife to the preacher. Along here are perils that wise negroes understand.

"Why should such indications and tendencies surprise us? No man lives by the labor of his hands who can live by his wits, least of all American white men. The negro's dangers are greater because his opportunities outside the labor of his hands are few. No arguments, nor frettings, nor denunciations, nor laws, nor force can multiply them; time and new conditions, possible only to the 'time element,' can increase them.

"The educated negro finds it difficult to succeed in the practice of law. White people employ attorneys of their own race, and a negro will have none but a white man for lawyer when large sums are at stake, or life or liberty are imperiled. But he has 'made a beginning' in the law.

"Next to teaching and preaching, medicine among professional pursuits offers the best field and the best opportunity for the capable negro. The reason is, there is a generally recognized and felt need of negro doctors. Two of the institutions in connection with the Slater fund—Meharry Medical College, Nashville, Tenn., and Leonard Medical School, Raleigh, N. C.—are thoroughgoing schools of medicine and command the respect of the medical profession. The large majority of the graduates of the schools are doing admirably in the practice of medicine. They are a blessing to their race and are successful and useful citizens."

The following, from the *Charleston (S. C.) News and Courier*, gives some idea of how the negro appreciates an education at Claflin University, South Carolina: "The students come from all parts of the State, and a better class of colored families are represented than usual. From the number of students (902), their condition and their work, it would seem as if the colored people are taking more than ordinary interest in the cause of education. Many parents are making great sacrifices to send their children to Claflin, and many of the students are in much better circumstances than their parents at home. The students lack early home training. They do not have access to daily papers, magazines, or books like most white children. As a rule subjects of importance and interest are not discussed in the family circle, and on account of these drawbacks the colored student labors under disadvantages. A lack of general information is noted by the professor. Their behavior is, as a rule, very good. There is not, in the knowledge of the officials of the institution, a single student who visits a barroom, smokes in the campus or in the streets.

"A student probably has less expense at Claflin than at any other educational institution in the country. Think of it—all actual expenses for a session covered by $52! What can be cheaper? This is popular education. The figures seem to be hardly credible. Here is the itemized bill for a month: Rent, $1; incidentals, 50 cents; tuition, 50 cents; board, $3.50; washing, $1; total, $6.50 per month and $52 per session. You may think that dormitory rent at $1 and washing at $1 are reasonable. But you, as many others, will ask how can a living working being be fed for $3.50? Well, it is done at Claflin, and here is how it is accomplished. Fifty students club together and get a table at the dining hall for which they pay no rent. They are not afraid of work and agree to do all the washing, waiting, and setting of tables in turn. A purchasing committee is appointed, and they have potatoes, meat, corn, and rice at the cheapest market price. The only expense besides the food is that of a cook. It seems almost incredible, but the students eat substantial meals and the bill of fare shows what they eat."

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From the report of the American Missionary Association committee in 1891.—"One of the greatest needs of the colored people is coming to be that of competent, educated, Christian leaders of their own race, preachers, teachers, and other professional men, a need not likely to be adequately supplied except by the colleges and higher schools sustained by this and other Christian bodies. It may be safely assumed from the history of other races that no leadership will be permanently accepted by the colored people except such as shall come from their own ranks. In furnishing through its higher institutions such a thoroughly equipped leadership to take the place of its own at the earliest moment, this association will make one of its best contributions to the welfare of the colored race. Another encouraging fact in the same direction is the growing interest in the theological department. As an ignorant ministry has been and still is the curse of the colored people, a thoroughly educated ministry is the highest boon we can possibly confer upon them."

"*Straight University* has numbered 582 students, who come from a wide area. It is not uncommon for students who can speak no English to seek this institution from Cuba, Central America, Mexico, or some parts of Louisiana. It is an inspiring thought that they will return to their homes, as some have returned, with Christ in their hearts and thrifty thoughts in their heads to radiate good influences in those revolutionary states. This institution has been more than filled. Hundreds have been refused admission. Every year shows marked improvement in the quality of student life in this, as in all our schools. Pupils come better prepared. They are more earnest and more energetic. The demand for teachers from this institution is greater than the supply. Seventeen of its former students are now teaching in the city schools of New Orleans. Many others are filling important places as teachers, superintendents, and preachers in neighboring States. Various industries for men and all kinds of needlework and housework for women are well taught."

Temperance is taught in all the higher colored schools.—Rev. J. C. Roy: "In all of these schools the principle of temperance is taught and the students go out and propagate these sentiments among their people. In this way they produce an immense amount of temperance sentiment among the colored folks."

The Negro Conference at Tuskegee, Ala.—A negro conference made up of representatives from that district of the South known as the "Black Belt" was held at Tuskegee, Ala., on February 23, 1892. About 450 colored farmers, ministers, and teachers were present, and a full and candid discussion was had of questions affecting the industrial, moral, educational and religious future of the negro population.

In dealing with the question of the proper means to be adopted for the correction of the existing unsatisfactory order of things, the conference suggested various remedies, which may be summarized, in the language of those assembled, as follows:

"(1) That, as far as possible, we aim to raise at home our own meat and bread. (2) That as fast as possible we buy land, even though a very few acres at a time. (3) That a large number of our young people be taught trades and that they be urged to prepare themselves to enter as largely as possible all the various avocations of life. (4) That we especially try to broaden the field of labor for our women. (5) That we make every sacrifice and practise every form of economy that we may purchase land and free ourselves from our burdensome habit of living in debt. (6) That we urge our ministers and teachers to give more attention to the material condition and home life of the people. (7) We urge that our people do not depend entirely upon the State to provide schoolhouses and lengthen the time of the schools, but that they take hold of the matter themselves where the State leaves off, and by supplementing the public funds from their own pockets and by building schoolhouses bring about the desired results. (8) We urge patrons to give earnest attention to the mental and moral fitness of those who teach their schools. (9) That we urge the doing away with all sectarian prejudice in the management of schools."

The Lake Mohonk Conference.—In June, 1891, there was held at Lake Mohonk, N. Y., a conference of distinguished editors and educators on the negro question. It was presided over by ex-President Hayes, and among those present were Dr. Lyman Abbott, of the Christian Union; Dr. W. H. Ward, of the Independent; Dr. W. T. Harris, United States Commissioner of Education; Gen. O. O. Howard, Dr. Charles H. Hall, Mr. Morris K. Jessup, and Rev. R. T. Middleditch, of the Christian Enquirer. At the conclusion of the conference the following platform was adopted.

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1. The accomplishing of the primary education of the negro by the States themselves, and the further development of means and methods to this end, till all negroes are creditably trained in primary schools.
2. The largely increased support of schools aided by private benevolence, which shall supply teachers and preachers for the negro race.
3. The grounding of the vast majority of these teachers and preachers in common English studies and in the English Bible, with the further opportunity for any of them to carry on their studies as far as they may desire.
4. The great extension of industrial education for both men and women.
5. The encouragement of secondary schools established, maintained, and conducted by negroes.
6. The purchase of homesteads by as many negro households as possible, with an increased number of decent houses to replace the old one-room cabin.
7. The establishment by the Government of postal savings-banks, in which negroes can be encouraged to save their earnings until they can purchase homes.
8. The aid of public education by the National Government for the special benefit of those sections in which illiteracy most prevails.
9. The removal of all disabilities under which negroes labor by the sure forces of education, thrift, and religion.

HAMPTON NORMAL AND AGRICULTURAL INSTITUTE.

A pamphlet has been published giving a sketch of the twenty-two years' work of the Hampton Normal and Agricultural Institute, Hampton, Va., a full and extended account of which is soon to be issued. As this institution has a very important part in the work of educating the colored race, having been one of the pioneer colored schools, and having at the present time nearly 1,000 students in attendance, 650 of whom are boarding pupils, it may be well to learn from this pamphlet something of the character which was so active in its establishment and also of the early history of the enterprise.

Dr. S. C. Armstrong, who has had charge of the institute from its foundation, was born in the Hawaiian Islands in 1839. His parents had been missionaries there for eight years at the time of his birth, and his father was the minister of public instruction from 1847 till the time of his death, in 1860. Dr. S. C. Armstrong, then a young man, left the islands and went to Williams College, Massachusetts, to complete his education, and he attributes whatever measure of success he has attained to the instruction there received from Dr. Mark Hopkins. When he undertook the work at Hampton his purpose was to put in operation there the same plan and system of education that he had become acquainted with in the Hawaiian Islands under his father's superintendence. His statement of the disordered condition of the country at that time shows that he had many serious difficulties to contend with.

"In March, 1866, I was placed by Gen. O. O. Howard, Commissioner of the Freedmen's Bureau, in charge of ten counties in eastern Virginia, with headquarters at Hampton, the great contraband camp, to manage negro affairs and to adjust, if possible, the relations of the races.

"Colored squatters by thousands and Gen. Lee's disbanded soldiers returning to their families, came together in my district on hundreds of abandoned farms which Government had seized and allowed the freedmen to occupy. There was irritation, but both classes were ready to do the fair thing. It was about a two years' task to settle matters by making terms with the landowners, who employed many laborers on their restored homes. Swarms went back on passes to the 'old plantation' with thirty days' rations, and nearly a thousand were placed in families in Massachusetts as servants through the agency of a 'home' in Cambridgeport, under charge of a committee of Boston ladies.

"Hardest of all was to settle the ration question; about 2,000, having been fed for years, were demoralized and seemed hopeless. Notice was given that in three months, on October 1, 1866, all rations would be stopped, except to those in hospital, for whom full provision was made. Trouble was expected, but there was not a ripple of it or a complaint that day. Their resource was surprising. The negro in a tight place is a genius.

"It was my duty every three months to personally visit and report on the condition of the ten counties; to inspect the bureau office in each in charge of an army officer; to investigate troubles and to study the relations of the races. The better class of whites were well disposed, but inactive in suppressing any misconduct of the lower class. Friendliness between the races was general, broken

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only by political excitement, and was due, I think, to the fact that they had been brought up together, often in the most intimate way, from childhood; a surprise to me, for on missionary ground parents, with the spirit of martyrs, take every pains to prevent contact of their children with the natives around them.

"Martial law prevailed; there were no civil courts, and for many months the bureau officer in each county acted on all kinds of cases, gaining generally the confidence of both races. When martial law was over and the rest were everywhere discontinued, the military court at Hampton was kept up by common consent for about six months.

"Scattered families were reunited. From even Louisiana—for the whole South was mapped out, each county officered, and as a rule wisely administered—would come inquiries about the relatives and friends of one who had been sold to traders years before; and great justice and humanity were done in bringing together broken households.

"Gen. Howard and the Freedmen's Bureau did for the ex-slaves from 1865 to 1870 a marvelous work, for which due credit has not been given; among other things, giving to their education an impulse and a foundation, by granting three and a half millions of dollars for schoolhouses, salaries, etc., promoting the education of about a million colored children. The principal negro educational institutions of to-day, then starting, were liberally aided at a time of vital need. Hampton received over $50,000 through Gen. Howard for building and improvements.

"On relieving my predecessor, Capt. C. B. Wilder, of Boston, at the Hampton headquarters, I found an active, excellent educational work going on under the American Missionary Association of New York, which, in 1862, had opened, in the vicinity the first school for freedmen in the South, in charge of an ex-slave, Mrs. Mary Peake. Over 1,500 children were gathering daily; some in old hospital barracks—for here was Camp Hamilton, the base hospital of the Army of the James, where, during the war, thousands of sick and wounded soldiers had been cared for, and where now over 6,000 lie buried in a beautiful national cemetery. The largest class was in the Butler School Building, since replaced by the fine John G. Whittier Schoolhouse.

"Close at hand, the pioneer settlers of America and the first slaves landed on this continent; here Powhatan reigned; here the Indian was first met; here the first Indian child was baptized; here freedom was first given the slave by Gen. Butler's famous 'contraband' order; in sight of this shore the battle of the *Monitor* and *Merrimac* saved the Union and revolutionized naval warfare; here Gen. Grant based the operations of his final campaign. The place was easily accessible by railroad and water routes to the north, and to a population of 2,000,000 of negroes; the center of prospective great commercial and maritime development—of which Newport News, soon to have the largest and finest shipyard in the world, is beginning the grand fulfilment—and, withal, a place most healthful and beautiful for situation.

"I soon felt the fitness of this historic and strategic spot for a permanent and great educational work.

"The suggestion was cordially received by the American Missionary Association, which authorized the purchase, in June, 1867, of Little Scotland, an estate of 125 acres (since increased to 190), on Hampton River, looking out over Hampton Roads.

"Not expecting to have charge, but only to help, I was surprised one day by a letter from Secretary E. P. Smith, of the American Missionary Association, stating that the man selected for the place had declined, and asking me if I could take it. I replied, 'Yes.'

"Till then my own future had been blind; it had only been clear that there was a work to do for the ex-slaves, and where and how it should be done.

"The thing to be done was clear; to train selected negro youth who should go out and teach and lead their people, first by example by getting land and homes; to give them not a dollar that they could earn for themselves; to teach respect for labor, to replace stupid drudgery with skilled hands; and to these ends, to build up an industrial system for the sake not only of self-support and intelligent labor, but also for the sake of character. And it seemed equally clear that the people of the country would support a wise work for the freedmen. I think so still.

"The missionary plan in Hawaii had not, I thought, considered enough the real need and weaknesses of the people, whose ignorance alone was not half the trouble. The chief difficulty was, with them, deficient character, as it is with

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the negro. He is what his past has made him; the true basis of work for him and all men is the scientific one—the facts of heredity and surrounding: all the facts of the case.

"There was no enthusiasm for the manual-labor plan. People said, 'It has been tried at Oberlin and elsewhere, and given up; it don't pay.'

"'Of course,' said I, 'it can not pay in a money way, but it will pay in a moral way, especially with the freedmen. It will make them men and women as nothing else will. It is the only way to make them good Christians.'

"The school has had from the first the good fortune of liberal-minded trustees, who accepted its unformulated, practical plan when it opened, in April, 1868, with 2 teachers and 15 pupils, and adopted my formal report of 1870, the year of its incorporation under a special act of the assembly of Virginia.

"By the act of incorporation the school became independent of any association or sect and of Government. It does work for the State and General Government, for which it receives aid, but is not controlled or supported by them.

"From the first it has been true to the idea of education by self help, and I hope it will remain so. Nothing is asked for the student that he can provide by his own labor, but the system that gives him this chance is costly. The school depends on charity for $60,000 a year; the student gets nothing but an opportunity to work his way. While the workshops must be made to pay as far as possible, instruction is as important as production.

"Steadily increasing, its full growth, just reached, is 650 boarding students, from twenty-four States and Territories, averaging 18 years of age, 136 of them Indians; 80 officers, teachers, and assistants, of whom half are in the eighteen industrial departments and shops; 300 children in the Whittier (primary) department.

"The school is maintained at a total annual cost of about $155,000. Deducting the labor payments of negro students (say $55,000), $100,000, which is $154 apiece, is the net annual cost to the public. This is provided, first, by annual appropriation from Virginia of $10,000, interest on the State Agricultural College land fund (act of Congress, 1862); second, by an appropriation of $20,000 by Congress for the maintenance of 120 out of our 136 Indians at $167 apiece; third, by an income of about $10,000 from our endowment fund (of $194,000) and from rents; fourth, by about $60,000 contributed by the people, in the form of $70 scholarships, donations for general purposes and occasional unrestricted legacies. The school is never closed, but reduced nearly one-half in the summer; many colored students go out to find work, and 60 or more Indian students have 'outings' among Massachusetts farmers.

"A great stimulus to this institute and to all like work has been the 16,000 negro free schools of the South—nearly 2,000 in Virginia alone—costing the ex-slave States nearly $4,000,000 a year in taxation.

"Northern charity, at the rate of about $1,000,000 a year, with liberal Southern State aid in some cases, is supplying over twenty strong normal and collegiate institutes, mostly under church auspices, where not far from 5,000 adult select negro youth of both sexes are being fitted to teach and lead their people—industrial education being more and more appreciated and introduced. The Slater fund has been a great stimulus to their technical training. The negro girl has proved a great success as a teacher. The women of the race deserve as good a chance as the men.

"So far it has been impossible to supply the demand for negro teachers. Schoolhouses and salaries, such as they are, are ready; but competent teachers are the great and pressing need, and there is no better work for the country than to supply them.

"But the short public school sessions, of from three to seven months, do not give full support, and skilled labor is the only resource of many teachers for over half the year. As farmers and mechanics they are nearly as useful as in the schoolroom. Hence the importance of industrial training.

"Hampton's 720 graduates, discounting 10 per cent as disappointing, with half that number of undergraduates, are a working force for negro and Indian civilization. To fit them for this field has cost, since April, 1868, the round sum of $1,350,000, not including endowments, of which over $500,000 is represented by the school's 'plant,' which is good for generations to come.

"Every year an account of funds received has been rendered in detail.

"It was not in the original plan of the school that any but negroes should be received, though the liberal State charter made no limit as to color; but when, in 1878, a 'Macedonian cry' came from some Indian ex-prisoners of war in Flor-

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ida—once the worst of savages—through Capt. R. H. Pratt, whose three years' wise management of them in Fort Marion had resulted in a wonderful change, seventeen were accepted at private expense, Bishop Whipple providing for five of them. The Hon. Carl Schurz, then Secretary of the Interior, was quick to appreciate the success of their first few months at Hampton, and sent us more Indians from the West; then Congress, on the strength of the results at Hampton, and of Capt. Pratt's proved capacity, appropriated funds to start the great work at Carlisle, where over five hundred Indian youth, under Capt. Pratt, are being taught the 'white man's way.'

"The annual Indian attendance at Hampton is now 136, of whom 120 are aided by Government, the rest by charity. The death rate, once alarming, has, for six years, been not quite one a year. Of the 345 returned Indians, but 25 are reported as unsatisfactory, but 4 of them bad; the rest are employed as farmers, catechists, preachers, teachers, mechanics, clerks, etc.; 35 seeking further education, 6 of them in Eastern normal schools and colleges, and 42 of the girls are married, in good homes.

"The old homesickness of Indians at eastern schools is nearly over. The three years' period at school, which was formerly too much like a prison term, is more and more ignored, and the idea of fitting for life, whatever time it takes, gains strength. Indians are no longer coaxed to come. Twice as many as we can take wish to come; yet the really desirable ones are not very many, and we do not care to increase our numbers. Our Indian work is illustrative rather than exhaustive.

"In the twenty classes—of 1871 to 1890, inclusive—723 graduates have received diplomas, 280 young women and 443 young men. Of these, 25 are Indians—8 young women and 17 young men—the first Indians graduating in 1882.

"Of the 723 graduates, 604 report as teachers; 80, a trifle over 11 per cent, report failure to teach. Of these 80, 9 are Indians, which brings down the per cent of colored graduates failing to teach to almost exactly 10 per cent. That 16 out of the 25 Indian graduates have taught is a very good showing for them, considering the fewer opportunities to teach which have been open to them.

"Of 39 graduates (colored) we have been unable to obtain any report.

"The total number of those who report having other regular occupation than teaching is 271. Of these, 191 have taught as well. While the balance—413—do not report other regular occupation than teaching, the great majority find employment as they can—at farming, trades, or service—between school terms, or cultivate their own land and keep house.

"The principal regular occupations reported besides teaching and the number reporting in each are as follows:

Of the young men:	
Professions: Ministry, 16; law, 17; medicine, 6; total	39
Missionaries in Africa	2
Mechanical trades	42
Agriculture (as an exclusive occupation)	36
In business for selves (merchants, etc., other than above)	23
In Government or civil service (U. S. Army, United States Department clerks, custom-house clerks, postal clerks and carriers, policemen, light-house keeper, county surveyor, superintendent of schools)	35
Bookkeepers and clerks, 13; treasurers, 3	16
Music	4
Of the young women:	
Physician (an Omaha Indian)	1
Missionary in Africa	1
Trained nurse (2 colored, 1 Indian)	3
In business for selves (store, millinery, laundry, gardening)	6
Dressmaking and sewing	9
Printing	1
Music (organist and singing)	5
Housekeeper (exclusively), but many more are keeping house for themselves	19
Matron	3
At service (exclusively)	8

"The total number of children reported as having been taught by our graduates is 129,475. This number is, of course, approximate.

"Some light on the frequent question as to the comparative mental endowment of black and 'colored' in the negro race is perhaps to be gathered from the unforeseen and rather striking result of an investigation of the distribution of the highest class honors since 1874, when they were first awarded.

"At Hampton, salutatory and valedictory are equal honors, the one for the young women, the other for the young men.

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"Leaving out the Indian salutatorian of '86 and valedictorian of '89, and one year when the programme was made up from graduates of previous years, we find that, of the fifteen colored girl salutatorians, four were black, three dark, seven light, and one 'apparently white.' Of the fifteen young men valedictorians, seven were black and one dark, and seven were light. In other words, of young women, seven were dark and eight light; of young men, eight were dark and seven light; which divides the honors as nearly equally as possible; fifteen to the dark and fifteen to the light. After the first decade of the school, investigation was made with a precisely similar result. That it should again appear over the whole period of seventeen years is surprising and seems significant."

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CHAPTER XIV.

THE SWEDISH OR LING GYMNASTICS.

By G. B. PUTNAM, *Principal of Franklin School, Boston, Mass.*

The third wave of popular interest in physical culture has been rising rapidly of late in this country, and it is to be hoped that it may reach and effect for good all our public schools.

It is said: "We grant that gymnastics should be introduced at once, but what system shall be employed?" There is no American system. This is confirmed by Dr. Edward Hitchcock, of Amherst College, who says: "I have been working at physical culture for a quarter of a century. I do not, however, think that we have a system," and by Prof. E. M. Hartwell, of Johns Hopkins University, who says: "It is not calling a thing by a name that makes a system, and that is the point I wish to urge in regard to the so-called American system. We have none."

The Germans have a system developed by "Father Jahn," who from love of Fatherland introduced turning throughout Germany, producing wonderful results among its youth in the early part of the present century.

His system was imported into this country, as early as 1826, by Dr. Charles Beck, at the Round Hill School, Northampton; by Dr. Follen, at Harvard University, and by Dr. Francis Lieber, at the Gymnasium in Boston. These were able, enthusiastic men and good teachers. All three were pupils of the illustrious Jahn, who said of the latter that he "possessed good moral behavior, was ingenious and clever, as well as a good leader and teacher of gymnastics," and yet their efforts failed of lasting success.

Many of the good features of Jahn's system have been appropriated by numerous teachers in our higher schools and colleges, as well as by those in charge of our city gymnasia. They have introduced them at random, with others from England, France, or Sweden, or among devices of their own invention, in order to establish a so-called American system. Some good results have followed, but there remains a crying demand for a system which is adapted to the felt necessities of public schools from primary to high-school grades.

I am persuaded that the Ling system of Sweden, as it stands to-day, is just what we need.

It has stood the test of seventy or eighty years, and its effects have long been visible.

A correspondent of the New York Tribune, traveling in Sweden thirty years ago, wrote as follows: "I attribute the superior physique of the inhabitants of this country, in a great measure, to the gymnastic exercises which they receive in the public schools. This kind of training is universal. Every school building has its large high room with earthen or matted floor, with all sorts of gymnastic implements. The scholars are not allowed to exercise on what they wish, but there is a regular scientifically arranged system. They are trained in squads and move and march at the word of command. The smaller or weaker boys begin with the lowest grade of exercises and follow up according to a scientific system arranged to promote health. They all seem to go into it with the greatest relish and show well-trained muscular power."

A lady from Finland recently remarked that at her home they could always distinguish a lady from Sweden, for she walked a queen. Thirty years ago John D. Philbrick, the sagacious superintendent of Boston schools, saw clearly the needs of the pupils in the way of physical culture, and in his report of September, 1860, dwelt at length on these needs, and made suggestions for meeting them, saying, among other things, "The principal remedy I would suggest is

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the introduction into all grades of schools of a thorough system of physical training as a part of school culture, in which every pupil shall be required to participate. I fully agree with an able author, that a universal course of training of this kind, scientifically arranged and applied, in connection with obedience to other laws of health, might, in one generation, transform the inhabitants of this land from the low development now so extensive to the beautiful model of the highest form of humanity."

The report was referred to a subcommittee of five of the ablest men in the school board, and they, largely through his influence, recommended the appointment of a competent teacher and the daily practice of gymnastics, and they say, after speaking of the injurious effects of certain violent exercises: "The system invented by Prof. Ling, of Sweden, which is called free gymnastics, is not liable to this objection. It consists of a variety of motions of the head, chest, trunk, and limbs, performed with energy and vigor, without the use of fixed apparatus. Indeed, most of the exercises, and perhaps sufficient for the purpose of our public schools, require no apparatus whatever, and no special room set apart for its practice. This system, in a modified form, it is deemed both desirable and practicable to introduce into all our schools, and it is recommended that it be made an obligatory branch of education."

But the school board was not then ready to follow the advice of their subcommittee, and a golden opportunity was lost.

Nearly thirty years have passed and Mrs. Mary Hemenway, who, in the establishment of cooking schools and the introduction of sewing, has been a real benefactor to the children of Boston, has turned her attention to the introduction of a system of physical culture that she may thereby benefit the schools of the city.

In the autumn of 1888 she secured a hall and employed as instructor a graduate of the Royal Central Gymnastic Institute of Sweden, which Prof. Hartwell pronounces the best school for training teachers of gymnastics in the world.

Classes were formed from among the teachers of the public schools, and they entered earnestly upon the task of fitting themselves to teach the Ling system.

The first public exhibition of it was given by a dozen ladies of the normal class at the conference on physicial training, in Huntington Hall, Boston, in November, 1889. Again its peculiar features were exhibited at Mechanics' Hall before some four thousand people on the afternoon of April 5, 1890, by a normal class and also by pupils of the first and fifth classes of the Franklin Grammar School. This exhibition was under the auspices of the American Association for the Advancement of Physical Education, which was holding its annual meeting in the city.

"But who was Ling?" I am often asked. Peter Henrik Ling was born in Ljunga, province of Smaland, Sweden, November 15, 1776.

His father was a clergyman, but young Peter was soon left an orphan, and in early manhood, prompted by a love of adventure, traveled over Europe. His journeys were apparently aimless and he was often reduced to extreme want.

He succeeded, however, in mastering several modern languages and finally returned to Sweden.

Soon after, while suffering from an attack of the gout in the elbow, he thought to cure it by exercise, and to this end he learned the art of fencing.

The remedy proved effective, and his success led to the idea that other diseases might yield to proper exercise. Hence the origin of the Swedish movement cure, as the author of which his fame has become world wide. It has been practiced not only in the leading countries of Europe, but in the United States as well. That he might be able the better to apply his theories he became proficient in anatomy and physiology, and not content with healing the sick he devoted himself to inventing and arranging a system of exercises adapted to the harmonious development of the bodies of children and also the physical perfection of those destined to the life of a soldier.

In 1805 he became professor of fencing in the university at Lund and later was appointed master of fencing in the Military Academy at Carlberg.

In 1813 the Royal Central Institute of Gymnastics was established at Stockholm for the purpose of extending the application of his theories, and he became its director. Here he remained until his death, which occurred in 1839.

He received the rare honor of being made a member of the Swedish Academy, and the king conferred upon him the title of Knight of the Order of the North Star. The work which he laid down has been perfected by his pupils and successors, and, during these many years, patients have flocked thither for healing, and students for normal training in the three departments of gymnastics.

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Again, it is asked, "What is the Swedish system?" Let us first ask, "What is its aim?" It is based on the following proposition: "The object of educational gymnastics is to train the pupil to make his body subservient to his own will." This can only be accomplished by practice, regular and systematic. If the proper practice is secured, then activity, dexterity, strength, and health are quite sure to follow.

The Ling system has three departments, medical, military, and educational, and of the latter only do I write.

The exercises are classified as follows:

1. *Introductions*, or orders to gain attention and good position.
2. *Arch flexions*, or movements for the back and chest.
3. *Heaving movements*, or exercises in lifting the body by the arms or in extending them.
4. *Balance movements*, to give a correct carriage and general equilibrium.
5. *Shoulder-blade movements*, to flatten the back and pull the shoulders backward in their proper place.
6. *Abdominal exercises*, to strengthen the muscles of the abdomen and to aid digestion.
7. *Lateral trunk movements*, to strengthen the lateral parts of the trunk.
8. *Slow leg movements*, to increase the circulation in the lower limbs, to quiet the action of the heart, and to counteract palpitation.
9. *Jumping and vaulting*, to cultivate speed of motion and to effect the coördination of movements.
10. *Respiratory movements*, to increase the capacity of the lungs, to restore breathing to its normal rhythm, and to help counteract the evil effects of precipitate movements.

In each of these classes there may be scores, if not hundreds, of exercises of varying strength. From these a selection is made for a "day's order" or programme for the day. This provides exercise for the whole body. Nerves, muscles, and internal organs, as well as the blood vessels, have all received due attention.

Teachers do not usually take the exercises in their exact order, but make such selections as the special needs of particular classes seem to require.

Suitable exercises are available from these classes for years of work in free gymnastics, but as pupils become more advanced fixed apparatus may be desired even in our schools, and no objection would be made to a well-equipped gymnasium in connection with each, but this is not essential.

One of the features of special value in this system is that a "fundamental position" is first assumed, and whatever may be the subsequent positions taken or movements executed there is an immediate return to this. Hence there is constant practice in taking and holding that position which presents the best pose and carriage that can be secured.

Another marked feature is its progression. It begins with the simplest movements which could not harm an invalid or the feeblest pupil, and by years of practice it leads on gradually, by movements stronger and stronger and of longer duration, to feats before which an athlete might stand appalled. Of course these would never find a place in the school room.

As has been shown, each "Day's Order" has its progression also. One cardinal principle is that not every possible motion or position is of value or to be permitted. Only such are selected as are adapted to accomplish some specific end. That end is clearly seen and its attainment provided for. No exercise is performed simply because it is "pretty."

Another is that movements are made in response to words of command, no music being employed. Ling's belief was that "there is a rhythm of movement as well as of music, but there is an essential difference between them, and often no adjustment is possible. The rhythm of the movement must be sacrificed to that of the music if the latter is introduced, and for a large part of the movements music is an impossibility, since no musician could ever adapt it to them.

The use of words of command is to me one of the marked excellencies of this system, for if there is any one thing which our American children need it is the habit of obedience, and obedience so prompt that they are hardly aware that they are obeying.

I have read of a stalwart band of rebellious slaves, who once attacked their master, who was sick, alone, and unarmed. In tones of command he exclaimed: "Lay down your arms, you rascals, go instantly to your work or I will have every one of you flogged within an inch of his life." He was completely in their power, and yet, so confirmed was their habit of prompt obedience, that, to a man, they threw down their arms and fled from his presence.

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Our pupils are not our slaves, but it is for their good and ours that they render instant and cheerful obedience.

The habit early formed in their physical exercises will have its effect all along the line of school work.

A former major of a school battalion, recently informed me that he considered this habit of prompt obedience the best part of the military drill in which he had had so conspicuous a part. Because "dictation is contrary to the American spirit," is an argument in favor of "commands" rather than a valid objection against them.

In my student days muscle was the end and aim, and a powerful biceps flexor was the pride of its possessor and the envy of all who failed to secure it. Not so in the Swedish system. The nerves, respiratory organs, etc., receive even more consideration. The aim is not to acquire the strength of a giant, but that symmetry of proportion and harmony of development which shall best fit for a life work.

A distinguished physician recently said, "Show me one who has been an athlete, who is now more than 42 years old, and I will show you a prematurely old man." There is some justice in the remark, for of those of my associates who were excessively trained for the development of muscle not one is alive to day. From the Swedish system no such results need be expected.

To the best of my knowledge, the teachers, both male and female, who have received drill in this system are unanimous in praise of it, both for its good effects upon them, personally, and for its adaptability to the needs of the schools.

At a recent meeting of the masters, where for the third evening this subject had been under consideration, Mr. Waterhouse, head master of the English high school, said that in his opinion a system of exercises for our public schools should be, 1, simple; 2, light; 3, safe; 4, comprehensive; 5, progressive; 6, varied; 7, lively, and that, after a careful investigation, he was satisfied that the Ling system furnished all of these requisites, and was therefore what should be introduced. That the system will soon be authorized by the school committee of Boston I have no doubt.

Several cities in the vicinity have already adopted it.

ADDENDUM.

[Extracts from the report of the director of physical training in the Boston, Mass., public schools (Dr. E. M. Hartwell), December, 1891.]

Boston has earned the right to be considered the most influential center in America of the movement for promoting Swedish educational gymnastics. This result, which has been brought about within the last three years, is primarily due to the wisdom, generosity, and public spirit of Mrs. Mary Hemenway, and secondarily to the discussions, reports, and votes of your honorable board precedent to its adoption of the Ling gymnastics for the public schools on June 24, 1890. The establishment by Mrs. Hemenway of the Boston Normal School of Gymnastics, which already has no equals and few rivals in the country as regards the genuine and thoroughgoing character of its training, is an event of capital importance in the history of physical training in America, and may well be ranked beside the gift to Harvard University of the Hemenway gymnasium, by Mr. Augustus Hemenway, her son.

The Boston Normal School of Gymnastics had its beginning in October, 1888, when, at Mrs. Hemenway's invitation, a woman's class, composed of twenty-five public-school teachers, was formed for the purpose of testing, under the instruction of a trained Swede, the adaptability of the Ling gymnastics to use in the Boston schools. The experiment proved so satisfactory that on April 25, 1889, Mrs. Hemenway offered to provide similar instruction for one year, without expense to the city, for one hundred teachers of the public schools who should be permitted to use the Ling gymnastics in their several schools. June 25 the school board voted to accept this offer, and in the ensuing September the class was formed. On September, 1889, the board accepted "with grateful appreciation the generous offer of Mrs. Mary Hemenway to provide a teacher of the Ling system of gymnastics, for service in the normal school, free of expense to the city." Mrs. Hemenway's further offer to provide free instruction "for those masters and submasters who may desire to make a thorough study of the Ling system for the benefit of the Boston public schools," was accepted by the board

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on October 22. Mrs. Hemenway continued to maintain the "masters' class" and to provide the normal school with a special teacher of Ling gymnastics throughout the school year 1890–91. The "masters' class" numbered 50 in 1889–90 and 57 in 1890–91. In 1889–90 there were 190 women engaged in teaching in the public schools who received instruction in the Boston Normal School of Gymnastics. In 1890–91 the number was 140. Its first class of graduates, numbering 33, was graduated June 6, 1891. The demand for the services of graduates and pupils of this school, as special teachers of Ling gymnastics, greatly exceeds the supply.

October 8, 1889, the committee on hygiene, which had been given full powers in the department of physical exercises (on March 12), presented a well-considered "report of the board of supervisors on physical training in the public schools." (School Doc. No. 10, 1889.) The concluding recommendations of the supervisors were as follows:

"1. That the Ling system of gymnastics be the authorized system of physical training in the public schools and that it be introduced into them as soon as teachers are prepared to conduct the exercises.

"2. That a competent teacher of this system be employed to train the pupils in the normal school and the teachers in the public schools.

"3. That for the coming year provision be made for training at least the pupils in the normal school, and the teachers of the first and second classes of the primary schools, and the fifth and sixth classes of the grammar schools."

These recommendations were approved by the majority of the committee on hygiene and a minority report was made by Miss Hastings. Both reports were tabled. December 10, "the whole subject of physical training in the public schools was referred to the next school board."

Meanwhile on November 29 and 30, 1889, Boston was the scene of the largest and most notable conference on physical training ever held in the United States. Dr. W. T. Harris, the United States Commissioner of Education, presided over its deliberations. The call for it was signed by John W. Dickinson, secretary of the Massachusetts board of education; E. P. Seaver, superintendent of the Boston public schools; Francis A. Walker, president of the Massachusetts Institute of Technology; and by the presidents of Boston University, Colby University, Maine, and Wellesley College, as well as by many members of the Boston school committee and a large number of physicians and others prominent in educational circles. The audience at each of the four sessions of the conference numbered from fifteen hundred to two thousand persons. * * *

The programme, which embraced papers, discussions, and illustrative class exercises in gymnastics, was a varied and interesting one, and served not only to set forth the general nature and effects of muscular exercise, but also the salient principles and characteristic methods of the German and Swedish and so-called "American" systems of school gymnastics. Similar discussions and illustrative gymnastics on a large scale signalized the fifth annual meeting of the A. A. A. P. E., held in Boston in April, 1890. The public and educational mind was much awakened and not a little enlightened by reason of so much discussion and exposition.

January 16, 1890, a standing committee on physical training was appointed. Dr. W. A. Mowry, its chairman, made an exhaustive report on June 24, embodying the results of a wide tour in the West and South to observe the peculiarities and workings of various systems of physical training in public schools. The committee, without a dissenting vote, recommended the following:

Ordered, That the Ling or Swedish system of educational gymnastics be introduced into all the public schools of this city.

Ordered, That the appointment of one director of physical training and four assistants be authorized.

Ordered, That the salary of the director of physical training be $2,640 a year and that the salary of each assistant be $1,080 a year.

The following order was substituted for the second and third orders appended to the report:

Ordered, That a director of physical training and one or more assistants be employed, the total salaries for the same not to exceed the sum of five thousand dollars ($5,000) per annum and that the committee on physical training be authorized to nominate suitable persons for these positions, to commence at the beginning of the next school term.

In accordance with the above orders, the present director of physical training was elected on November 25, 1890, at a salary of $3,000 per annum, and the present assistant instructor was elected March 10, 1891, at a salary of $1,680. * * *

I reëntered the service of the city of Boston on January 1, 1891, after an inter-

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val of 13½ years, and at once began visiting schools of all grades, from the kindergarten to the high school, having a twofold purpose in view. In the first place, I was desirous to familiarize myself with the main features of the organization and administration of the schools and, secondly, I wished to obtain an idea of the character and extent of the physical training which had been introduced into the schools, in accordance with the vote of the school committee, on June 24, 1890.

Toward the end of February I addressed a circular letter to the principals of schools, in response to which I received a statistical return, covering the month of January, 1891, regarding all high, grammar, and primary schools.

The returns showed that upwards of 1,100 teachers were giving gymnastic instruction, for some 17 minutes daily, to their classes. In some schools the old memorized gymnastic drill had been continued, pending the appointment of a director of physical training; but the greater number of teachers, in the grammar and primary schools, were engaged in an honest attempt to teach the Ling free standing movements. Counting the masters of the 55 grammar schools, 1,120 teachers, in the grammar districts, were returned as teaching gymnastics, of which number, below the grade of master, 844 were teaching Ling gymnastics and 221 teaching what may be termed not inaptly "mixed gymnastics." The best results were observed in those schools whose masters had attended the teachers' classes of the Boston Normal School of Gymnastics and had taken particular pains, besides, to lead, assist, and criticise their teachers in the work of class instruction in gymnastics. In certain schools extremely creditable results had been attained, especially in those where the teachers had formed themselves into classes and hired special instructors in the Ling system to give them normal lessons.

It gives me pleasure to say that I have been much surprised and gratified by the interest, zeal, and intelligence shown by the teachers of the grammar and primary schools, as a body, in the subject of physical training.

Since April 1, 1891, I have availed myself of the invaluable services of Mr. Hartvig Nissen, who was elected assitant instructor in physical training, March 10, 1891. Mr. Nissen has assisted me in visiting and inspecting schools and has conducted normal classes in the Ling gymnastics for the teachers of the grammar and primary schools. Two inspections of the grammar schools have been made since they opened on September 9. On the basis afforded by the first inspection, 8 were rated "excellent," 18 "good," 17 "passable," and 12 "poor." The result of the second inspection is as follows: 8 were marked "excellent," 20 "good," 20 "passable," and 7 "poor."

I propose to continue such classes until the class work in the schools shall show that the average teacher has grasped the main principles of the Ling school gymnastics and is able to carry them into effect.

Early in 1890 I was engaged by Mrs. Mary Hemenway to deliver a course of lectures on physical training before the students of the Boston Normal School of Gymnastics. These lectures were given in the Old South Meeting-House, at noon, on six Saturdays, viz, March 21 and 28, April 18 and 25, and May 2 and 9. Through the kindness of Mrs. Hemenway the lectures in question were thrown open to all teachers of the Boston public schools. I was thus enabled to meet so many of the teachers as cared to consider the salient facts regarding the origin, development, and characteristic features of the principal types and systems of physical training.

I also addressed the masters of the grammar schools upon "Physical training in the Boston schools" at the May meeting of the Masters' Association.

In accordance with an order of the school committee, which was passed May 12, Mr. Nissen gave special normal instruction to the teachers of the primary and grammar schools of some forty districts during May and June. This form of instruction has been continued, though in a less formal way in all grammar districts, from the opening of the schools in September last until now. In accordance with an order passed by the school committee on December 8, arrangements have been made to provide for the normal instruction, twice a month, in the Ling free standing movements, of all teachers of the primary and grammar schools, not especially excused by the committee on physical training, during the remainder of the present school year.

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CHAPTER XV.

DISCUSSIONS OF EDUCATIONAL QUESTIONS.

I.—*Civic instruction.* II.—*Compulsory attendance.* III.—*Courses of study—Adjustment of school programmes.* IV.—*Education.* V.—*Higher education.* VI.—*Kindergartens.* VII.—*Manual and industrial training.* VIII.—*Methods of instruction.* IX.—*Physical training.* X.—*Private and parochial schools.* XI.—*Public schools.* XII.—*Reading and literature.* XIII.—*Religious and moral training.* XIV.—*School management and discipline.* XV.—*Secondary education.* XVI.—*Teachers.* XVII.—*Text-books.*

I.—CIVIC INSTRUCTION.

The truer meaning of patriotism.—Hon. William A. Poste, New York civil-service commissioner: Patriotism, as an impulse, like all the enthusiasms, counts for nothing in the every-day life unless its deep and truer meaning is fully perceived. The ideal of citizenship can not rise higher than the moral nature. The flag may wave from every school-house, and the boy may know on how many battle fields it led the way to glory, but unless behind all is the thought that a man is as much bounden to his country to vote thoughtfully as to fight for the flag if the country calls, that flag to him is indeed but striped bunting. Unless he can understand that for a man to sell his vote * * * is moral treason, what boots it to him that in every age men have gone to their deaths for truth, for fatherland, and that their babes might breathe free air.

Beliefs that are individual and inherent.—Hon. William A. Poste: The beliefs that men live by and die for are not to be drilled into the boy like the rule for long division. The genesis and growth and persistence of political opinions are often beyond analysis and, to the theorist, unscientific, illogical. It is well that this is so. These convictions are matters very largely of personal dispositions, intangible but persistent as the traits of race. If they are individual and inherent, they are of more positive personal force throughout the multitude than any dogma nurtured in the schools. Let the boy come to his political faith as Thomas Jefferson, Andrew Jackson, and Abraham Lincoln came to the principles that made and saved the State. It is out of the clashing of such individualisms, spear against shield, that the will of the people works. Its voice is heard above them. The voice is not always the voice of God, but in times of trial, in hours when great and solemn questions are asked and answered, the thunder of Sinai is in it.

"Patriots' Day" proposed.—Superintendent J. R. Preston, Mississippi: One school day should be set apart every year as Patriots' Day. Planting trees and flowers to adorn school premises—an engaging practice now in vogue in most of the States—is undoubtedly a potent means of establishing attractive associations and of endearing the school, and through it the State, to the hearts of future citizens. If this be a laudable practice, how much more worthy and significant to utilize a day to implant in their natures the seeds of genuine patriotism. Just as ground is prepared to nourish tree and flower, so may hearts and intellects be quickened to cherish high resolve.

So let us have Patriots' Day dedicated as a national holiday, on which to focalize the light and grandeur of our country and photograph its glory upon the hearts of the children. Let parents and the community at large congregate at the school, and in song and recitation and patriotic speeches revive their love of country and deepen their spirit of fidelity to its principles.

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The highest patriotism.—W. D. Atkinson: True patriotism is the endeavor to elevate my country's standard of honor up to that which is right and true, and I should love my country for that in her which is devoted to righteousness. I should love the truth and righteousness which God has given us, and seek to bring my country up to it. I am not to make patriotism, therefore, the end, but rather the means by which I may hope to bring the nation to a love of righteousness. I do not think the observance of any patriots' day will ever attain that result. The time wasted or spent in that could be better spent in educating the young men in these moral truths and principles which will make the citizens seek that which will be for his country's highest good; hence it is not patriotism itself we are striving to attain, but it is love of truth, of right, and righteousness. Patriotism is nothing more than this; that is the highest patriotism.

A great difference.—Principal George M. Grant, Queen's University (Ontario): The school should teach patriotism, and let us not forget that there is as great a difference between patriotism and the blatant, arrogant spread-eagleism—which in Europe is called Chauvinism—as there is between enthusiasm and fanaticism. The one is healthy and full of generous inspirations and the other unhealthy and the destroyer of true patriotism and morality. The one teaches us to love our own land and race first, because it is ours, and we believe that it has done and that it promises to do most for man and for that which is best in man, especially for the good old cause of liberty, peace, and righteousness. The other teaches us to hate men for the love of God or the love of country.

II.—COMPULSORY ATTENDANCE.

Compulsory education in Ontario.—Hon. George W. Ross, minister of education: By an act of last session the police commissioners of every city, town, and incorporated village are required to appoint truant officers. This act came into effect on the 1st of this month [July, 1891]. It may take a year or two to acquaint the people of the province with its requirements. It may also take some time to train the truant officers to the proper discharge of their duties. As the schools of Ontario have been free for over twenty years, there is no doubt the people will gladly accept their natural complement, compulsory education, as indispensable.

The most effective agency for securing school attendance.—Report of Committee of National Council of Education, D. L. Kiehle, chairman: Everyone, and very certainly every educator, will place the first stress upon the natural, self-commanding, and assimilating power of a public free-school system, and will agree that this should be perfected to meet every demand of the highest standard of physical, intellectual, and moral training; that it should be protected from every corrupting influence and every political or religious entanglement, and that its true value by every means should be impressed upon the public mind.

Next, as to the necessity and practicability of applying the compulsory feature for the general enforcement of attendance, there will be various opinions, according to points and circumstances of observation.

In some large cities, and especially in manufacturing districts where children are at the mercy of soulless corporations, the State has successfully enforced a compulsory law; but in the State at large, and especially in agricultural districts, your committee are not aware of any enforcement of a compulsory law, which proves that it can be made an effective part of our educational system.

Our system ought to be extended by educational methods.—Superintendent D. L. Kiehle (Minnesota): The Government ought to look to the limitation and improvement of its citizenship, and we as educators ought to put more stress upon the improvement and extension of our educational system by educational methods. Our system ought to be perfected. We ought to do more for our young people. We ought to make our system less objectionable. We ought to introduce the moral element as perfectly as possible, to meet the demands of that class of people who have been accustomed to associate religious instruction with secular instruction. Now, coming to the legislative part, theoretically your committee has no doubt that it is perfectly legitimate that men be required to do these things; but practically it questions whether it is not better to enforce the compulsory law in our towns and cities moderately, watching the development of circumstances, and not relying on the law to effect very much at present in agricultural districts or over the country at large, but at all times holding it as a subordinate feature of our educational system.

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The labor unions approve it.—Hon. B. G. Northrop (Clinton, Conn.): It is a significant fact that the labor unions in this country and in Europe approve obligatory education. Both political parties favor it. So far as I know, no suggestion for the repeal of our rigid law has been made in the legislature, nor in any caucus or public meeting in the State (Connecticut).

III.—Courses of Study—Adjustment of School Programmes.

On the necessity of colleges to supplement high schools.—W. T. Harris (from an address delivered before the Ohio Teachers' Association, June, 1888): The course of study preparatory for college omits for the most part those branches of study which bear the name of "moderns." Modern civilization has developed three great increments and added them to the inherited wisdom of the race. These increments are modern natural science, modern literature, modern history. These three moderns had no well-recognized existence in schools of higher education a century ago. A knowledge of them was not demanded or expected from the educated man, unless he was a specialist. The condition of things has changed so materially through the influence of the newspaper and periodical within the past fifty years that no man can pass for educated without more or less minute acquaintance with these three phases of modern activity. They have become recognized as conventionalities of intelligence. This is the all-sufficient reason for introducing the rudiments of these things into the most elementary schools and for continuing their study in all grades of higher schools. Nothing can make up for the student, who shall receive a higher education, the deficit in his culture caused by a neglect of the study of the three "moderns" in early life. They ought to exist in his mind through the period of his primary education as well as in his secondary and higher education. Without these the disciplinary effect of classical study must necessarily be weakened through the want of modern facts to explain, for the classic lore is related to these moderns as embryonic presupposition, and this is why it helps to understand ourselves.

If this be true, the modifications that have been made in the course of study pursued in college in recent times (say in the last twenty years) are not for the most part based upon a correct insight into the difficulty to be met. The management of college education in this country has answered the objection which charges it with neglect of the three "modern" branches until the last two years of the college course, by raising the standard of admission sufficiently to cover the work of the first two years of the former college course, and thereupon it exhibits a programme in which the three moderns are represented throughout the course either as "required" or "elective" studies.

The question in dispute did not concern the length of time devoted to higher education, but the early introduction of the moderns into the course of study, so that these moderns stand side by side with the disciplinary studies through the whole course. If four years of preparation and two years of college work, or six years in all, were devoted to the exclusive study of the classics and mathematics, with an almost entire neglect of moderns, the case would not be altered if these six years should be relegated entirely to the preparatory school. In order to meet the difficulty discussed here, the college should have changed the conditions required for admission, and thus have compelled the preparatory school to introduce the moderns in a proper manner side by side with the classical studies. Of course the elevation of the standard of the collage can be justified on its own grounds. It obliterates the mischievous distinction that existed between the standards of American and English colleges. But this is not so important as the readjustment demanded of the college in order to bring it into harmony with primary education, founded on a true appreciation of the demand of modern studies in education. As is usual in the discussion of political and social reforms, the parties to the dispute are busied, each, with bringing forward his own partisan view of the case. There is little that is judicial and impartial, going to the root of the question and confirming and establishing what is of permanent worth on either side. The advocates of the "moderns" wish to dispense entirely with classical study while the defenders of the college system refuse to yield place for the "moderns."

In the colleges of the Northwestern States, led by the State universities, there has been some substantial progress made towards a modification that will recognize the received high-school course of study as a preparation. But such modification only makes these colleges a separate phase of education, differing more and more widely from the standard college of the Atlantic States. To reach the high standard of admission required by the Eastern colleges the

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public high school ought to add two years to its course. This would make the course of study in the common-school system fourteen years instead of twelve, as at present, and is impracticable. The average age of the high-school graduate at present being eighteen and a half years, it would manifestly be unwise to demand six years instead of four years to complete his college course. The colleges that have raised their standards of admission, therefore, have done much to widen the breach between high-school and college education.

In the signs of the times I do not discover any promise of the reform of this state of things on the part of the management of colleges. Even the cloud "no bigger than a man's hand" in the Northwest does not indicate so much true appreciation of the necessity of moderns in primary and secondary education as it indicates a wise insight into the desirability of connecting the college with the public school as it is. It surrenders its convictions in behalf of the old régime, and lowers its standard in order to adapt itself to unpropitious circumstances. In better times it hopes a reform in the public school that will devote more attention to the classics and mathematics at the expense of the "moderns." Meanwhile, the influence of the college is felt in the building up of preparatory courses within the high school, fastening upon the public-school system a recognition of the necessity of private, separate, and distinct secondary education in order to fit for a college education.

What is the remedy?

One must turn to the teachers of public high schools and to superintendents of public instruction for the adoption of the only means of relief. Unusual efforts must be made on the part of public high schools to induce their pupils to complete their education in colleges. The personal influence of the teachers, in one year's time, will avail to double the number of high-school graduates who seek a college training. The greater maturity of mind which comes from a well-balanced preparatory course will furnish a prevailing argument in favor of a more symmetrical system. Within a few years, when the colleges have come to derive a large majority of their pupils from public high schools, this question will receive its due consideration for reasons of private interest, if for no other. The numerical strength of high-school graduates who have subsequently received a college education will assist in the solution of this question.

But no solution will be more than a makeshift if it does not secure the recognition of "moderns" as an essential portion of the course of study in all elementary and preparatory schools and a like recognition of the necessity of classic study in all secondary and higher education.

In the "moderns" one finds the expression of his present civilization; in the classics, its embryonic forms and evolution.

After the presentation of these special discussions of the elements of our problem we may draw the following conclusions:

1. If the universities and colleges of the country shall more and more depend on special preparatory schools for their students, then it will follow that college graduates are less likely to be in sympathy with the system of common schools.

2. If the high-school teachers, on the other hand, continue to be lukewarm toward college education, and perhaps go so far as to discourage their pupils from completing their education in colleges after graduating from the high school, it will follow that the men of amplest directive power, the leaders in literature and the molders of public opinion, especially on the subject of education, will not be furnished by the common-school system.

It will follow, too, that the numbers who resort to college will not increase in proportion to our population. These dangers, in brief, I hold in this paper, may be averted by earnest personal endeavor on the part of high-school teachers and the superintendents of city schools to influence high-school pupils to present themselves in large numbers for admission to college. Extra efforts will double and treble the high-school quota in college, even under the present disadvantages of course of study.

This first step being taken, it will become possible, then, to secure the desirable changes in the higher course of study.

The gap between the elementary schools and colleges.—President Eliot, of Harvard University: Only nine Massachusetts high schools send pupils to Harvard College every year. In 1889, out of 352 persons who were admitted to Harvard College as candidates for the degree of bachelor of arts, 97, or 27½ per cent, were prepared at free public schools; but these schools were only 30 in number from the whole country, 23 of them being New England schools. The plain fact is that not one-tenth of the schools called high in Massachusetts habitually maintain a course of study which enables the pupil to prepare himself for admission

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to Harvard College, or to any other college in the State which enforces its requirements for admission as stated in its catalogue.

If this is the condition of things in what may be called an urban State, what must it be in a rural? If a patriot were compelled to choose between two alternatives, one that the less intelligent half of his countrymen should be completelly illiterate, the other that half of the select children capable of receiving the highest instruction should be cut off from that instruction, which would he choose? He would find the decision a dreadful one to make; for either alternative would entail an incalculable loss upon his country. Yet in the present condition of secondary education one-half of the most capable children in the United States, at a moderate estimate, have really no open road to colleges and universities. I rehearse these well-known facts that we may appreciate the gravity of the problems presented by the subject. * * * Recognizing the plain fact of to-day that secondary schools are sufficient in number and defective in quality, what can colleges do, under these adverse circumstances, to make themselves as useful as possible to the population while awaiting a better organization of secondary education? Is it not their plain duty to maintain two schedules of requirements, one for the degree of bachelor of arts, the other for the degree of bachelor of science (or some equivalent), the latter demanding much less preparatory study than the former? The American colleges have been severely criticized for offering to receive students of confessedly inferior preparation to that required of candidates for the degree of bachelor of arts; but even the oldest and strongest of them have done this, and from a genuine desire, as I believe, to be serviceable to as large a proportion as possible of American youth. One lower grade of admission examination, leading to a distinct degree, is an expedient concession to the feeble condition of secondary education throughout the country. That grade of secondary schools which can not prepare pupils for the bachelor of arts course, but can prepare them for the bachelor of science course, will so be brought into serviceable connection with the colleges. * * *

I venture to think that some colleges have gone unnecessarily far in offering different courses with descending requirements for admission and different degrees. They seem to say if a candidate can not get into our classical course, perhaps he can enter the literary course; if not the literary, then the scientific; if not the scientific, at any rate the agricultural. The value of all degrees seems to me to be diminished by this unnecessary multiplicity of titles and conditions, and the standards of good secondary schools must needs be unfavorably affected by a long sliding scale of admission requirements to the several courses offered by a single institution.

Turning now from the consideration of the palliatives which colleges may resort to in the present feeble and distracted condition of secondary education, I pass to the more attractive study of the remedies for existing evils and defects.

To improve secondary education in the United States two things are necessary: (1) More schools are needed, and (2) the existing schools need to be brought to common and higher standards, so that the colleges may find in the school courses a firm, broad, and reasonably homogeneous foundation for their higher work.

1. More schools.—Secondary schools are either day schools or boarding schools, the urban school being primarily a day school and the rural a boarding school. The public secondary school is now urban almost exclusively, and it must be admitted that it is likely to continue so, for no promising suggestion has as yet been made of a rural area of support for a highly organized secondary school. It is admitted that neither a rural township nor a union of contiguous rural districts can support such a school. The county has been suggested as a possible area of support, but there is no sufficient evidence that a rural county, apart from its town or towns of dense population, could support a good high school. To increase the present number of secondary schools which can really fit pupils for college, what are the most hopeful lines of action? In the first place every effort should be made by school authorities, the press, and all leaders of public opinion to promote the establishment of secondary urban day schools, both public and private, and to adapt the programmes of existing schools to the admission requirements of some college course which leads to a degree. It is noticeable that in the older cities, and to some extent in the younger also, the best private schools exist right beside the best public schools. The causes which produce one class of schools simultaneously produce the other. Secondly, rural communities ought to be authorized by suitable legislation to contribute to the establishment (including in that term the provision of building) and annual support of urban secondary schools which are conveniently situated for their use.

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Thirdly, there should be created by law special secondary school districts much larger than the areas which support primary and grammar schools and taking account of railroad communications. It is much easier for a boy or girl to go to school 15 miles by rail than to walk to school in all weather 2 miles by country lanes. The rural population has something to hope from legislative recognition of railroads as chief features in secondary school districts. The Massachusetts normal schools illustrate this principle, for they are really high schools, partly boarding schools, and partly local and railroad day schools. Fourthly, every effort should be made to stimulate private benevolence to endow rural secondary boarding schools or academies under corporate management. A boarding school ought always to be in the country and a rural secondary school would almost necessarily be, in part at least, a boarding school.

2. *Common schools.*—The existing means of elevating and regulating secondary school instruction may be conveniently considered under two heads: (*a*) State aid and supervision, and (*b*) college admission requirements. Both agencies are already useful, but both may be greatly improved and extended.

(*a*) *State aid and supervision.*—It seems to have been the object of high-school legislation in some States, as, for example, in Massachusetts and in Maine, to encourage the creation of a large number of low-grade high schools without really expecting them to effect any junction with colleges. Such at any rate has been the effect of the mandatory legislation of Massachusetts, and such must be the general result of the aid offered to free high schools by Maine. This unprosperous State now offers to give any free high school as much money per year as its supporting area annually appropriates for instruction in the school, provided the State grant shall not exceed $250 in any case. No inspection or examination of aided schools is provided for. Such legislation encourages the establishment of numerous weak schools, without helping appreciably the schools already strong.

Much wiser is the legislation of Minnesota, which established twelve years ago a State high-school board, and offered $400 a year to any high school which was found by the board after competent inspection to fulfill the following conditions: The aided school must receive both sexes free, and nonresident pupils also without fees, provided such pupils can pass examinations in all common-school subjects below algebra and geometry, and must maintain "regular and orderly courses of study, embracing all the branches prescribed as prerequisite for admission to the collegiate department of the University of Minnesota not lower than the subfreshman class." * * * This high-school legislation seems to me the wisest which has been adopted in the United States. It encourages only schools which are already well organized; insists that aided schools shall connect directly with the university; avoids expensive examinations, provides any needed amount of inspection; grades schools by their programme and general efficiency, not by individual examination results; gives no pecuniary advantage to a large school over one equally well conducted but smaller; requires aided schools to take nonresident pupils without charge; and applies almost the whole of the State's grant to the direct development of instruction, which is by far the most productive application of any money intended to benefit schools. * * *

It is unquestionable that the New York State regents' examinations have tended to raise the average standard of instruction in the academies and high schools, to extend and improve school programmes, to bring schools and colleges together by doing away with useless diversities of programmes in secondary schools and useless diversities of admission requirements in colleges, and to stimulate some of the communities which maintain these schools to give them better support and to take pride in their standing. These are great services which deserve the respectful attention of the other States of the Union and of all persons interested in the creation of an American system of secondary education. The regents have proved that a State examining board can exercise a stimulating, elevating, and unifying influence upon hundreds of institutions of secondary education scattered over a large State, and can wield that power with machinery which, considering the scale of operations, may fairly be called simple and inexpensive. * * *

(*b*) Let us turn now to the consideration of college admission requirements as means of raising and controlling secondary school instruction.

College requirements for admission act effectively only on those secondary schools which prepare some of their pupils for college; upon that large proportion of high schools and academies which do not they have only an indirect although sensible effect. For the broad purposes of the State the influence of

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colleges, even if they were associated together, could not be so immediate and potent as the influence of the State, whether the latter were exerted by inspection or by examination. It is in a narrower field, therefore, that the higher institutions of education can act on the lower. At present they act in three ways.

The feeblest way is by prescribing for admission a knowledge of certain books or of certain well-defined subjects, and then admitting candidates on the certificate of any schoolmaster that they have gone over all the prescribed books or subjects. If the prescriptions of the college are judicious, they are not without some favorable effect on the curricula of the certifying schools; but it may be reasonably objected to this method that it gives the college very inadequate protection against incompetent students and the public no means of forming a just estimate of different schools. Certificates are apt to be accepted from good and bad schools alike, the anxiety to secure students in a struggling college overriding every other consideration. Particularly is this apt to be the case in a small college in which the president has succeeded in getting the subject of admission out of the hands of the faculty and into his own. Under this system a really good school has no means of proving itself good, and a bad school is not promptly exposed. Within a few years the feeblest of all methods has come into use, without any safeguards whatever, in the large majority of New England colleges, no system of State inspection or examination existing there, and no pretense being made that the certifying schools are examined, or even occasionally visited, by the colleges. A more demoralizing method of establishing a close connection between secondary schools and colleges it would be hard to imagine. Nevertheless, even under this loose and unguarded method, which only the two largest New England colleges have completely resisted, some good has resulted from coöperative action between preparatory schools and colleges to make admission requirements, on paper at least, uniform for the same subjects. The uniform requirements in English, which prevail all over New England except at Yale University, and have lately been adopted by some institutions in the Middle States, supply a noteworthy case in point.

The method just described is a corruption or degradation of a somewhat safer method of securing close connection between secondary schools and colleges which was first adopted twenty years ago by the University of Michigan. This safer method, as developed by that university, amounts to this: The university admits candidates on the diplomas given by any schools, near or remote, within the State or without, which are visited once in three years by a committee of the faculty, or by other persons designated by the university. The visit may be repeated if any important changes take place in a school within the three years. The diplomas must specify that the candidates have sustained examinations at school in all the studies prescribed for admission to one or other of the university courses leading to a degree. There were in 1889 seventy schools holding this "diploma relation" to the University of Michigan. It can not be doubted that this method is well adapted for recruiting rapidly a single dominant State university; but its value as a method for general adoption obviously depends on the thoroughness, impartiality, and publicity of the inspection which it provides. To me the inspection seems to fail on all three points. Considering the rapidity with which teachers are changed in American schools, an inspection once in three years seems too infrequent. I am wholly at a loss to understand how a busy college faculty can get time to inspect properly any considerable number of secondary schools, or how it can furnish a sufficient number of inspectors competent in all secondary-school subjects. * * * It is also obvious that the method is not public enough in its processes to demonstrate its fairness and sufficiency, and therefore to command general confidence. The single acting authority obviously has interests of its own to serve. I am not maintaining that this diploma method, as conducted in Michigan, has not worked well, or even that it has not worked so well as the method of admission by examination, as conducted in Michigan. It is some gain to establish friendly relations between seventy secondary schools and any university. I am urging that it lacks adequate securities, and is therefore not fit for general adoption. The Minnesota method, which provides in the State high-school board an independent inspecting authority, is in my opinion greatly to be preferred.

There remains the most effective mode in which colleges act on the superior sort of secondary schools, namely, the method of conducting careful examination in all the subjects acceptable for admission. These examinations have a fair degree of publicity; for the most colleges circulate freely their question papers. Harvard College also publishes in detail the results of its examinations for admission. Such examinations are no longer, as formerly, held only at the seat of

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the college conducting them, but may be held simultaneously at as many places as the convenience of candidates may require. Several Eastern colleges now conduct examinations at numerous places widely distributed over the country. Yale University distinctly announces that it will hold an admission examination "in any city or at any school where the number of candidates and the distance from other places of examination may warrant it." The method can easily be given a national application by any institution which has prestige and a numerous staff. In the long run it grades schools fairly, and it is very stimulating to the older classes of secondary schools. Like all examinations conducted by an authority independent of the schools, it also protects the masters of schools, both public and private, against the unwarrantable importunities of parents, trustees, and committeemen. Nevertheless it is open to some serious objections. In the first place it is not sufficiently public. The question papers may look well; but the standard for passing may be unreasonably low, the public having no means of estimating the degree of strictness with which the answer papers are marked. Secondly, the colleges have, until lately, acted singly, each for itself, without consultation or concert. Each college or university is, therefore, naturally supposed to be seeking its own interest rather than the common welfare. Thirdly, in a small college a few men, who perhaps have peculiarities or whims, may control all the admission examinations for many years to the disadvantage of the college and the annoyance of schools. All these evils would be removed or reduced by a system of coöperation among several colleges.

At the conclusion of this rapid survey I venture to suggest that there are three directions in which patriots who desire to see American secondary schools improved and connected more closely with colleges may look for progress:

1. I may expect State examining and inspecting systems to improve and extend, for they have demonstrated their utility; and remembering the extremes to which examination methods have been carried in England, we may reasonably hope that State boards will inspect institutions more and more thoroughly, as well as examine individuals. In this connection we expect that the profession of school inspector will become well recognized as a separate and honorable calling.

2. We may hope to see formed a combination of four or six of the universities which have large departments of arts and sciences to conduct simultaneously, at well-selected points all over the country, examinations in all the subjects anywhere acceptable for admission to colleges or professional schools, the answer papers to be marked by persons annually selected by the combined universities and announced to the public, all results to be published, but without the names of candidates, and certificates to be good anywhere for the subjects mentioned in them. We see reason to believe that such a coöperative system would be simple, though extensive; that it would present no serious difficulties, mechanical or other; that it would be very convenient and economical for candidates, and self-supporting at a moderate fee; and finally that it would be authoritative, flexible, stimulating, unifying, and just.

3. We may expect to see a great extension of the scholarship system, whereby promising youth are helped through secondary schools and colleges. States, cities, towns, and endowments provided by private benevolence will all contribute to the development of this well-proved system.

Principles which may govern an attempt to bring about uniformity of college admission.—From a report to the National Council of Education, James H. Baker, chairman of committee (1891):

(1) By comparison of the requirements of leading colleges a standard classical course may be selected which could at once be adopted without essential modification by those colleges.

(2) A preparatory course omitting Greek may also be recommended in which the substitution for Greek shall fall within regular high-school work. Such a course may be made up from the catalogues of those colleges which do not require Greek. It may here be noted that in this country, in Germany, and in England there are indications that Greek is no longer to be compulsory for college and university degrees. But at the same time the advantage of taking at least one classical language, especially the Latin, is strongly urged. The head master of Harrow, while he would not make Greek a compulsory study, urges the desirability of retaining Latin about as follows: "For scientific study a dead language possesses an advantage in that it does not invite the sacrifice of accuracy to utility. Latin is the language of law, of liberty, of religion. It is the parent of half the languages in Europe. It is strong and precise in grammatical idioms. It is furnished with the necessary means and appliances for

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teaching. I can not help thinking it would be an educational mistake of serious magnitude to lose the universality if the Latin language as an element of the higher education." We may add that Latin is required or advocated by most scientific schools and that its retention is generally desired,

(3) Colleges and preparatory schools not at present able to adopt standard preparation in full should pursue standard lines so that the work would all count toward the desired end, if the pupil wished to supplement it for an institution of the best class.

(4) A complete adjustment of the relation between high schools and colleges should be sought on the basis of a general high-school course. This idea will be subject to special consideration.

The committee will venture to suggest a classical preparatory course made up from the catalogues of several of the best colleges. In this course a little is taken from the Latin required by some colleges, and a concession is made to those which demand a modern language and some science and literature. Physics is selected because it includes more generic principles than any other science. The committee believes that this course thus made up is not a jumble of fragments, but that it has a natural coherence in plan and purpose, as much as any one of the courses upon which it is based. It should be especially noted that this course is suggested, not as the best possible one, but rather as an example of a course that might be established. It is also intended to show the folly of the present variations.

CLASSICAL COURSE.

Mathematics.—Algebra (elementary, complete); Plane geometry (with exercises).

Greek.—Four books of Anabasis; 3 books of Iliad; limited amount of sight reading; composition.

Latin.—Four books of Cæsar; 7 orations of Cicero; 6 books of Æneid; limited amount of sight reading; composition.

French.—Easy translation.

Science.—Physics, with experiments and notes.

History.—Greece and Rome (geography incidental).

English.—As recommended by the New England Association.

The colleges admitting without Greek substitute increased amounts of mathematics, of science, or of the modern languages. Therefore the following substitutes for Greek may be suggested, the rest of the course remaining the same as the regular classical course. The additional sciences selected have the prestige of influential recommendation.

COURSE-OMITTING GREEK.

[Substitutions for Greek.]

Solid geometry and plane trigonometry.
Additional year of French.
Chemistry (with experiments and notes) and botany.
Remainder of course same as classical.

A careful comparison of the courses above suggested as a provisional basis for uniformity with the courses of standard colleges will show that most colleges, high and preparatory schools could at once afford to agree to some such uniform requirements, and that the changes necessary for an adjustment would in no instance be vital or even important. Could uniform courses once be recommended by an influential convention of colleges and schools, every fitting school could adopt the one standard and say to the colleges, "Take our students if you wish them." Most colleges would be compelled to adopt the courses recommended.

But by far the most important and most troublesome problem is the complete adjustment of higher to secondary education. In the opinion of the committee the connection must be made by adjusting the colleges to the secondary schools and not the secondary schools to the colleges. President Eliot some years since pointed out that a good high-school finishing course must become more and more a good preparatory course. Mr. Harris is understood to maintain that the studies adapted to the age of secondary education should also furnish a good college preparation. This is in accord also with Mr. Hill's principles in the "True order of studies." It would be unsafe to deny that secondary education, which is adapted to the development of the mental powers and the enlargement

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of knowledge in the given period, is a good preparation for higher education. If elementary science and history and literature and art, as well as mathematics and classical languages, are adapted to the period of secondary education, then they are excellent as a basis for college work.

From the tendency of our institutions we must believe that more and more will the high schools become feeders of the colleges. The interests of colleges and high schools will be greatly enhanced by the closest union, and one important result will be an increase in the number who will seek higher education. There is one great advantage in postponing to as late a day as possible the necessity of decision regarding a college course. Whenever a boy decides to go to college he should find himself on the road thither.

Already Michigan University and the University of California admit to a four years' general course without any foreign language, while Northwestern University admits students with only one foreign language, ancient or modern. The State universities, we think, can afford to meet the regular work of the high schools. It is understood that there are some troublesome adjustments arising from the union of classical and English students in college classes. In large colleges the problem is not serious, because classes are divided. In smaller institutions a list of electives will make the necessary adjustment possible. Even in an inflexible course some substitutions are possible, as solid geometry and plane trigonometry for freshman mathematics. This phase of the problem, however, is not the most serious one.

We will proceed to suggest a high-school course that might be generally adopted. We include it in the five "fundamental disciplines" pointed out by Mr. Harris—a selection in general harmony with Mr. Hill's analysis. Since this theory of studies is now widely adopted we expect no opposition to our basic principles. In choice of specific studies, in arrangement, and amounts we are governed in part by comparison of many courses of study, as well as by thought upon relative values. The committee indorses the custom of requiring a foreign language in a high-school course, and for reasons previously cited would give the preference to Latin. The committee does not advance a definite opinion that more than one course is necessary for a high school or that the preparatory and the finishing courses might be identical. We simply suggest a basis for present uniformity and adjustment under existing conditions.

GENERAL HIGH-SCHOOL COURSE.

Mathematics.—Algebra, plane and solid geometry, plane trigonometry.

Foreign Languages.—At least three years of some foreign language, Greek or Latin or French or German, but preferably Latin.

Science.—Physiology, physics, chemistry, and at least botany or zoölogy, and geology or astronomy, and mental science.

History.—Greek, Roman, English, and epochs of modern civil government; political economy.

English.—History of literature, study of selections, rhetoric, compositions.

Art.—Drawing and music.

WHAT HAS BEEN DONE TOWARD UNIFORMITY.

In the interest of uniformity the "Association of Colleges and Preparatory Schools" and the "Commission of Colleges" in New England have been formed, and progress has been made in recommending and securing the adoption of uniform requirements in English, in Greek and Latin, and in modern languages. The State of Ohio has secured an agreement between the colleges and high schools through the mediation of the State Teachers' Association. The plan there adopted tends to make a perfect connection between high schools and colleges. The report of Prof. King and that of Mr. White, made during the consideration of the problem, contain many valuable suggestions. Many other States through their associations or their State universities are aiming at uniformity and at a closer relation between the colleges and the high schools. But it should be noted that State uniformity may hinder rather than aid national uniformity. State boundaries have nothing whatever to do with the choice of a college. As soon as possible educators should make the question a national one, instead of wasting energy in creating organized differences.

Plans of adjusting high-school and college courses of study in Ohio.—From report prepared by Superintendent E. E. White, of Cincinnati, and adopted by Ohio State Teachers' Association and Association of Ohio Colleges:

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LIMITATIONS OF THE HIGH SCHOOL.

Before submitting plans for full adjustment, your committee desires to state as clearly as possible the limitations of the high school as a preparatory school. These limitations are both economic and pedagogic. The fact that more than three-fourths of the pupils in our high schools will never enter higher institutions establishes the necessity of making the training therein the best possible as a final school course, whatever this may be. If this best possible high-school course is an adequate preparation for college, the proper articulation of the high school and college is secured. If, however, an additional course must be provided for the few who may wish to prepare for college, an additional demand is made on the resources of the high school—a demand which a large number of high schools may not be able to meet.

Besides, it is not possible for pupils, with few exceptions, to determine, on entering the high school, whether the way will be clear for them to go to college. Many who start with such a hope fall out by the way, and others, as they proceed in their studies, awaken to the desire for a higher education and see an opportunity to acquire it.

These facts show the impossibility of wisely classifying high-school pupils with respect to their future participation in college advantages. Whenever the desire to go to college takes possession of a pupil—and every high school should be a most potent awakener of such a desire—he should find himself in a direct road to the college gate.

But it is not enough that the high-school course looks directly to the college. It should also furnish the great body of its pupils with the best possible training, and, to this end, its course of study must be based on sound pedagogical principles. These principles clearly teach, as Dr. W. T. Harris has ably shown, that a true course of study must include all of the five great divisions of human knowledge, to wit, mathematics, language and philosophy, natural and physical science, history and government, and literature and art. It must also recognize the fact that each of these great divisions of knowledge has its natural sequence or development, corresponding to the mind's development, and this sequence or order must be observed, not only in the course of study, but in school instruction. To adopt Dr. Thomas Hill's famous simile, in his "True order of studies," a true course of study is like a spiral stairway surrounding the five great columns of human knowledge and cutting off a section of each at each round of its ascent. The special weakness of too many high-school courses is that they attempt to cut off sections of these columns that belong to a higher phase of mental development—that fall in the period of college training.

In harmony with these principles, a high-school course of study may properly include (1) algebra, geometry, trigonometry, and arithmetic (review); (2) language, including English and Latin or German or French; (3) science, including physical geography, physiology, and the elements of botany or zoölogy, physics, and chemistry; (4) history, including United States history and general history, and civil government; and (5) English literature and art, the latter including at least drawing, music, and vocal culture.

The experience of the high-schools of the country shows that it is not possible to give these several branches of study due proportionate attention if one-half of the time of the pupils is devoted to language, and this must be the case when the course includes both Latin and Greek in addition to English. The daily programme of a high school may wisely provide four daily class exercises for each pupil, provided these exercises do not exceed forty minutes each, and this is sufficient time for the best class work in high schools. When only one daily period is devoted to, say, Latin, in addition to English, it is not difficult to arrange a programme that will give due attention to the other four great branches of knowledge.

Your committee desires to emphasize the importance of making Latin one of the daily studies of the high school. A wide experience has shown that this is not only the best possible way of meeting the demand for language training, the best ideal training in language as logic, but it is the most fruitful element in the best possible preparation for higher courses, whether classical, scientific, philosophic or technological. It is regretted that there is not time to cite some of the conclusive evidence on which this claim for Latin as a high-school study is based. When Latin is omitted, either German or French should be taken. A true course of high-school training requires that the pupil take at least one language in addition to English.

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When we have found the best possible course of study for high schools we have found, as a consequence, what ought to be an adequate preparation for college, whatever the course to be pursued therein. A true college course ought to rest upon a true high-school course. In a philosophic scheme of education there is no occasion to adjust higher and secondary courses of study. The former rests upon and articulates with the latter. * * *

PLANS OF ADJUSTMENT.

I.—*On the side of the high school.*

The general or regular course of study in the high schools of Ohio should include:

1. *Latin*, its study beginning with and extending through the entire course—certainly not less than three years. It is not meant that all pupils in the high school should be required to take Latin, but efficient instruction in Latin should be provided, and as many pupils as possible be induced to take it. A conscientious effort should be made by all high-school teachers to induce at least all pupils who enter with the intention of completing the course to take Latin as the best possible course for them, whatever may be their future education or occupation. What is needed is an enthusiastic appreciation of Latin on the part of high-school teachers. When Latin is not taken, German or (for temporary pupils) a wider and more practical course in English may take its place.

2. *Mathematics;* elementary algebra being taken the first year; geometry, plane and solid, the second year; and spherical geometry, higher algebra (at least one-half year) and trigonometry and arithmetic (reviewed) in the third and fourth years. The putting of so-called "higher" arithmetic at the beginning of the high-school course is a serious mistake—a clear violation of sound principles of teaching, and a consequent waste of effort and opportunity. Eight years of training in arithmetic certainly ought to prepare the pupil for the successful study of the elements of algebra. It is also a mistake to put the study of higher algebra before geometry. The mathematics of form, as Dr. Hill has clearly shown, is easier and more elementary than the mathematics of abstract relations.

It will be observed that the mathematics here assigned to the third and fourth years (arithmetic excepted) belong properly to the college course; but high-school pupils, if well taught and not hurried, can master these branches in the last two years, and this, as will be hereafter seen, will make feasible a needed change and adjustment in the college course. When instruction in Greek is provided in the high school it can take the place of these higher mathematical branches in the third and fourth year, the mathematics of the first two years, with arithmetic, being sufficient for admission to college.

3. *Physical science*, including physical geography, physiology, and the elements of at least two of these four sciences, viz, zoölogy, botany, physics, and chemistry. When physiology is taught in the grammar grades, zoölogy or botany and the elements of physics and chemistry may be readily taught in the high school. This instruction in science should begin with and extend through the entire course, with three or four exercises each week. The aim of the course should be to make the pupils familiar with those concepts and facts that constitute the elements of these sciences, and to this end the pupils should study, as far as practicable, things and phenomena and not text-book language about these things. In science the study of things is a necessary preparation for the study of books, and hence science instruction in the high school should be largely objective. This is the significance of the modern laboratory and museum, appliances greatly needed in all high schools.

4. *History and civil government*, the former including United States history (if not taught in grammar grades) and general history. Fully one year, three to four lessons each week, should be devoted to general history, and not less than half a year to civil government.

5. *English literature and art*, the former including composition and rhetoric and literature proper and the latter at least drawing, music, and vocal culture. It is the general testimony of college teachers that college matriculates are deficient in English, and especially in the power to express their knowledge clearly and accurately. To remove this defect pupils should not only study the great masters of expression, but synthetic training in the art of language should receive more attention.

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It is believed that the general course of study outlined above is within the resources and reach of the high schools of the State, and especially of those schools which employ two or more teachers. It is based on the actual experience of the best schools. The changes made for the purpose of adjustment relate chiefly to mathematics and Latin, and these features have already been tested by school experience.

Your committee desires, in this connection, to emphasize the importance of a wiser concentration of energy in high-school instruction. The undue multiplication of branches of study and text-books is a serious dissipation of power. The principal aim of the high school is to give its pupils efficient training in the fundamental studies—what Dr. Harris calls the "fundamental disciplines."

II.—*On the side of the college.*

The course of study outlined above is an adequate preparation for all bachelor courses in college, the A. B. course alone excepted, and here the difficulty relates exclusively to the Greek. The colleges are at liberty to require for admission to all bachelor courses (1) requisite knowledge and skill in the common branches; (2) Latin, at least three years, and for technical courses either Latin or German; (3) the elements of algebra and plane and solid geometry; (4) English and English literature (character and amount to be announced at least one year in advance); (5) United States history and general history (limited); (6) physiology, physical geography, and the elements of at least two of these four sciences—botany, zoölogy, physics, and chemistry; and (7) drawing, music, and vocal culture.

In place of the Greek now required for admission to the A. B. course, they may call for spherical geometry, higher algebra (full one-half year), and trigonometry, at least plane—in other words, for present freshman mathematics—and also for some extra Latin, if necessary, and for one year of present college instruction in botany and zoölogy and physics and chemistry, now provided for in the high-school course.

Your committee suggests the following plans for meeting the absence of Greek preparation:

1. An acceptance of preparation in freshman mathematics (outlined above for third and fourth years of high school course) as a full substitute for one year of Greek. This change can be met in the college in two ways. Students who enter without Greek but with freshman mathematics can be permitted (1) to devote in the first year two recitation periods daily to Greek, omitting mathematics, or (2) what may be better, one period daily in freshman year to Greek and one to sophomore mathematics, and in the second year two periods daily to Greek, omitting mathematics.

It is believed that either of these plans will bring the student who matriculates without Greek, but with extra mathematics, to the junior year regular in all his studies, and this, too, without serious loss or inconvenience. To the college it involves the expense of two extra daily exercises in Greek for one year or one extra daily exercise for two years; and every fairly endowed college ought to be able to furnish this extra instruction.

2. A more radical plan of adjustment and a better one in the bringing of Greek wholly within the college course, as has been done successfully by several State universities. This change brings all the college courses into harmony with the high-school course outlined above. The adjustment of the courses is complete. Students who enter with two full years of Greek preparation can enter the junior class in Greek, and those with one year of Greek the sophomore class in Greek, the only changes required being in the recitation scheme or programme. No extra instruction in Greek is required.

Four years ought to be sufficient for the thorough mastery of the present Greek course, now requiring as a rule five years. It is believed that a year can easily be saved by making the Greek instruction continuous and more enthusiastic, and, as John Stuart Mill once clearly pointed out, time can also be saved by the use of better methods of teaching. (Besides, extra Greek as an elective can easily be provided in the senior year.)

AGENCY FOR EFFECTING PROPOSED ADJUSTMENTS.

It is clearly not sufficient to devise and adopt plans for adjusting high-school and college courses of study. What is also needed is the providing of an efficient agency for carrying these plans into effect; and here the experience of

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several of the States is suggestive—notably of New York, Michigan, and Minnesota.

The following plan for Ohio is recommended:

1. Let the association of Ohio colleges, or, if preferred a league of those Ohio colleges that may be willing thus to coöperate, formulate and prescribe the minimum requirements for admission to the several courses in each of the colleges associated, the same to be announced at least one year in advance. These requirements should be made definite, and they should fall within the general course of study above outlined for the high schools of the State.

2. Let committees be appointed by the college association, each representing at least two colleges, to visit the high schools within easy reach, and by personal inquiry and inspection determine whether such high schools are able to furnish the necessary preparatory training for one or all of the college courses, as indicated in the prescribed requirements for admission, the results and conclusions to be reported to a general committee of the association.

3. Let the high schools found worthy of such indorsement be put on a list of approved high schools and to give increased interest and weight to such approval let the graduates of these schools be admitted on application to any of the associated colleges without examination, save it may be in one of the more disciplinary branches, as Latin or algebra and geometry. These examinations might be helpful in securing greater attention to these studies and also in establishing a higher standard of attainment in them.

The visits of these examining committees should be improved to interest teachers and pupils in higher education and also to create a livelier interest in the community in the character of its high schools. It is easy to see how such visits could be made important occasions for strengthening the high schools as well as increasing interest in college education. The fact that these committees represent the colleges of the State and no particular institution would largely remove embarrassment on the part of the examining visitors. Of course no school should be visited without prior permission.

The faculty of the University of Michigan has for many years carried out a plan similar to the one commended above, and it is the testimony of all concerned that it has brought the high schools into closer relations with the university and headed many young people toward its halls. It has also greatly improved and strengthened the high schools of the State in public interest. Citizens take a special pride in seeing the high school of their city or town on the approved list and the visits of the university committees are made occasions of special interest.

The demands of the colleges on the secondary schools.—School and College: The problem of earlier graduation from college has in New England led to a somewhat odd result, a positive demand for a reform in the curriculum of the elementary schools. The colleges having in recent years appreciably increased their demands upon the secondary schools, are not now so inconsistent as to call for the accomplishment of the greater rate of labor in a shorter period, but are joining in a claim that more of the preparation for college should be done before the fifteenth year of the pupil's life. Two methods of accomplishing this are suggested—the "clipping-down process," by which the pupils who are to go to college shall be taken out of the elementary schools at the age of 11 or 12 and transferred to schools which shall specially prepare them for college; and the "enrichment" method, by which certain subjects essential in preparation for college may be begun three or four years earlier than they now are, and may be taken in the elementary schools. There are difficulties in both the proposed methods.

The relation of grammar and high school education to collegiate.—Frank A. Hill, head master Cambridge English High School: The great majority of pupils in the two hundred and fifty high schools of Massachusetts are pursuing a course of study that does not connect with the college. For such pupils the high school is a cul-de-sac, leading nowhere. Harvard College welcomes connection with all good high schools. It has provided avenues by which they may hope, one of these days, to prepare pupils without Greek. Unfortunately, it is harder to fit pupils for Harvard without Greek than with it. The greater demand is made on those less able to meet it.

It stands to reason that a training suited to a person whose course must cease after four years in the high school ought to be worth following up in college should the high-school graduate desire to go higher. I urge most strongly the connection of the college with the public-school system all along the upper line,

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not simply at those favored points where the classically trained touch the college. This connection would reduce the age of admission of many a belated pupil. This connection once established, a certain absurdity would disappear. Who would have dreamed, in advance of knowledge of this absurdity, that sensible men were capable, first, of raising barriers between the high school and the college; secondly, of removing them between the high school and the professional school, and then, thirdly, of wondering why our youth so numerously skip the college to enter the professional school. Such inconsistencies are due to independent groups of men working at cross purposes, consequences natural enough under the intense localism of our educational systems, but impossible under the strong central authority of France or Germany. If both routes to the professional school are to be kept open, it is more pressing duty to lengthen and stiffen the secondary courses for the benefit of those who take the short route than to shorten and probably weaken them for the benefit of those who take the long route.

The pupil who begins at 6 and moves along normally may enter college at 19. This is young enough for average minds. Quick, strong minds may profitably enter a year or two earlier. For such the way should be shortened, but not by contracting the whole system. It should be shortened, not solely for the purpose of keeping active minds sufficiently busy. The Harvard Grammar School, of Cambridge, is trying an interesting experiment in this direction.

The time has come to consider the wisdom of increasing the range and the grade of scholarship within the pursuit limits of the grammar school. When we note how much the boys of the gymnasium and the lycée have accomplished by the time they reach 15, the question comes home whether our grammar-school pupils are working on a basis sufficiently liberal and with a spirit sufficiently serious. There are strong reasons, however, why they can not do as much as the pupils abroad. We should be temperate in our suggestions of possible improvement. * * *

The arithmetic course should be reduced to make room for algebra and geometry, algebra through equations of the first degree, and geometry in a way to test the observing, inventive, and reasoning faculties, but with recognition of the fact that its principles can be grasped for practical purposes long before it is possible for the average pupil to give the formal and rigorous demonstrations of Euclid.

Elementary science should have a place. There is something seriously defective in our teaching if under it pupils do not gain in power to see and to think. Geography should be made an observational study to an increased extent. This can be effected with the aid of the *porte-lumiere*, a darkened room, and stereopticon views.

I hesitate to recommend an additional language for the grammar schools. Latin would hardly be tolerated. I fear it would be difficult, except in highly intelligent communities, to convince the public that French or German ought to be taken up in our grammar schools, although it is the practice abroad to begin a modern language very early. The additions proposed—they would be largely substitutions—should be worked out in a tentative way, some single school in an advanced community being selected for the experiment.

The changes proposed would require more teachers of a high range of attainments. This is the coming opportunity for the young women of the colleges as well as for the grammar schools. The proportion of liberally educated young women is increasing; the supply of such women for high schools promises before long to exceed the demand. It will be a glad day when the public shall demand as generous preparation for the teachers of the lower schools as for those of the upper.

The difficulty is with the preparatory schools.—H. L. Stetson, president Des Moines (Iowa) College: If the proper preparatory work could be accomplished I think there would be no complaint with reference to the length of our present college courses. If the student could be started at 13 or 14 years in his preparatory work, and if it could be made to cover the subjects most essential for him to enter his college course, he would be able to graduate at the end of the four years at about the age of those young men who enter the various professions without the college training; and the result of my investigation has led me to this conclusion, that the whole difficulty is not in the college course, but is in what leads to it. Our preparatory work is in such chaotic condition; we have so few thoroughly good preparatory schools. Some of them are engaged in teaching the classics and others entirely in teaching the sciences. Their pupils come to us without any regular preparation, and they are compelled to spend more time in

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preparing themselves for the four years than frequently is necessary to accomplish the entire course in college. In answer to these demands which have been made for increased scientific instruction the high schools—of the West particularly—and very many of the academies are devoting more and more time to the sciences and to English literature; and it may be, if this instruction is increased and made what it might be, our colleges may have to readjust their courses of study to this fact, requiring less of the classics for entrance and giving more attention to them and more attention to advanced work in the sciences, and in this way possibly we may be able to meet all the demand that is made for less time to secure an education.

Suggestions.—D. C. Gilman, president Johns Hopkins University: (*a*) The authorities in our educational system should really, as well as nominally, distinguish between the requirements of three scholastic periods, namely, the school, the college, and the university; or, in other words, between what is essential, what is liberal, and what is special in a prolonged education.

(*b*) The period of college life, which of late years has been carried forward so that it extends on the average from 18.5 years to 22.5 years (in many, perhaps in most of the older colleges) may be brought back to an earlier age, say from 16 to 20 years.

(*c*) The significance of the baccalaureate-degree school should be restored, so that it may be at least a trustworthy certificate, an approximate measure, both of the capacity and of the acquisitions of the possessor. In one way or another a consensus should be reached as to the "dignities, rights, and privileges to that degree appertaining."

(*d*) The rigidity of the class system should be relaxed, so that those who are exceptionally favored or exceptionally strong may, if they choose, run the course in less than the average time; and likewise so that any who are embarrassed by ill health, the necessity of earning a support, or the inadequacy of their early opportunities may spend more than the usual time without any implied discredit; indeed, without attracting any attention. The exaggerated emphasis given to the class system in our colleges seems to me most unfortunate.

(*e*) The enormous waste of time and energy at the school period, the time of preparation for college, must be arrested. * * *

If these remedies could be adopted, what would be the result? School life would usually end at 16 years of age, when "matriculation" in a college would indicate that the scholar was ready for higher studies. College life would usually end at 20 years of age, when a bachelor's degree would denote the attainment of a liberal education. Those who are fleet would go over the course in less time, and those who are handicapped would proceed at a slower rate. The hare would generally win; but, sometimes, the turtle. Professional or special education would then continue as long as the scholar might wish, three years being probably the usual period in schools of law, medicine, and theology. The young man would thus receive at 23 years or upwards his professional certificate or his diploma as a doctor of philosophy. He would have finished his university pupilage. An education like this would usually extend over eleven years—four in the preparatory school (from 12 to 16), four in college (from 16 to 20), and three in a professional school (from 20 to 23); but the period might be shortened or lengthened according to individual abilities or disabilities. If, then, the stronger universities would take the ground that, as a rule, none should be admitted to the professional courses, or to the freedom of university instruction, until they had attained a bachelor's degree, or in some other way acquired a corresponding preparation for advanced work, the reproaches of which we are conscious would soon disappear, and higher education would be more generally diffused, more wisely ordered, more serviceable to the public.

Changes in the grammar-school programme.—The Association of Colleges in New England, at its annual meeting, November 5 and 6, 1891, resolved to recommend for gradual adoption the following changes in the programme of New England grammar schools: (1) The introduction of elementary natural history into the earlier years of the programme as a substantial subject, to be taught by demonstrations and practical exercises rather than from books; (2) the introduction of elementary physics into the later years of the programme as a substantial subject, to be taught by the experimental or laboratory method, and to include exact weighing and measuring by the pupils themselves; (3) the introduction of elementary algebra at an age not later than 12 years; (4) the introduction of elementary plane geometry at an age not later than 13 years; (5) the offering of

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opportunity to study French or German or Latin, or any two of these languages from and after the age of 10 years. In order to make room in the programme for these new subjects the association recommends that the time allotted to arithmetic, geography, and English grammar be reduced to whatever extent may be necessary. The association makes these recommendations in the interest of the public-school system as a whole; but most of them are offered more particularly in the interest of those children whose education is not to be continued beyond the grammar school.

Discussion of the changes recommended in the foregoing paragraph.—George H. Martin, agent of the Massachusetts board of education, in an address before the Massachusetts Schoolmasters' Club: In discussing the proposed reforms I shall certainly limit myself to the class of pupils referred to in the memorandum issued by the college association, viz, pupils who are to leave school at 14. Concerning the first proposition to introduce elementary natural history in the earlier years there is practical unanimity among all public-school men. It was discussed by this club six years ago, and then the club was wholly in its favor. It is already a "substantial subject" in the best schools, and no school curriculum of recent construction would be considered complete without it, and it is taught everywhere objectively and not from books. It is true there is much crude and desultory work, but this is growing less as the limitations are removed. The subject is everywhere recognized as a most efficient instrument of training and is being used for that purpose. To say that it is in all schools in all communities would be to err, but the work is rapidly gaining, and its momentum will not be sensibly increased by the belated impulse from the colleges.

I am prepared to indorse heartily the proposition to introduce elementary physics into the later years. It should be taught by experiment, and is already so taught in some grammar schools, but the "laboratory method" is not practical for grammar schools, nor is "exact weighing and measuring by the pupils themselves." This requires individual opportunity and time, neither of which the pupils in the grammar schools can have, and a degree of self-control which children under 14 have not acquired. Nor is this work desirable. What these children do need is some knowledge of the simple principles of natural philosophy which will enable them to understand the natural phenomena about them and the varied applications in modern industrial life—the pump, the steam engine, and the telegraph.

The third proposition is to introduce elementary algebra at 12 or earlier. From this I dissent. Elementary algebra has neither practical nor disciplinary value for pupils not going into the higher mathematics. Its relations are purely numerical, and with most pupils in the high schools its operations are chiefly mechanical. As a discipline it has no advantage over arithmetic. In fact, it has infinitely less value than the analytical processes of Warren Colburn's first book. It is true children may learn early to juggle with x, and they may be pleased to see how nicely the "sum comes out," but this is not algebra in any true sense. I have found by experience that real algebra is severe discipline for students from 16 to 20 who have had full high-school training. To learn to solve numerical problems in the easiest way is neither *the* end nor *an* end to be sought with much solicitude.

The next proposition is to introduce elementary plane geometry at an age not later than 13 years. By this the association doubtless meant demonstrative geometry of the Euclidian type. The mental discipline derived from this study is of great value, but such discipline can not be acquired by classes of children 13 or younger. They can, as so many older students have done, memorize theorems and demonstrations, and recite them glibly. But this is not geometry; it is only words. The question is not whether children can be put into geometry, but whether geometry can be put into them. But there is a kind of geometry which is already everywhere in use in the well-organized public schools, and which is being developed as far as the capacities of the pupils will admit. It is not called geometry, but industrial drawing. It is throughout a study of form, its properties and relations. It is form in the concrete; it deals with geometrical relations experimentally and constructively. Its logic is inductive rather than deductive, and it looks directly toward the practical necessities of handicraft as well as to the broader culture which is a universal need.

Coming to the proposed study of Latin and the modern languages at the age of 10, time will allow but brief consideration. I can not see that Latin for children from 10 to 14 would have advantages either for discipline or use sufficient to justify its introduction. All that part which exercises chiefly the memory, and which constitutes the drudgery of the study, could doubtless be done earlier

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than 14, but only by dint of severe labor and by much displacement of other studies. I can not see how the children would get beyond the drudgery and receive any impulse from Latin as literature, nor would that nice linguistic work be possible on which the value of the study as mental discipline chiefly depends. This has some maturity as its necessary condition. Of modern languages, it is doubtless true that they can be learned colloquially more easily at 10 than at 14. But this argument proves too much, for they can be learned better at 6 than at 10, and better at 2 than at 6. If ease of learning is the end sought they should be put into the kindergarten. To this I should assent if there were teachers all along the line who could continue the work; but for children who are going to work at 14 it seems of doubtful utility to require or to allow them to occupy themselves for four years with either French or German.

In place of these that more extended work in the literature of their own language which is becoming so general in the best grammar schools, of which the association of colleges has evidently never heard, is infinitely more valuable. It has all the elements of culture for immediate purposes. It will be more likely to develop into a continuation study than any other subject, and to project itself into the post-school life and to influence it for good. Speaking for myself, I have no hesitation in saying that the present movement in grammar-school work in nature study, in drawing, in literature, and in music is sufficiently enriching, is more philosophical educationally, and will prove more practically and generally beneficial under the direction of the public-school men who have originated it than the lines of work proposed by the association of colleges.

Foreign languages in the grammar schools.—William C. Collar, Roxbury Latin School: That the presidents of a dozen New England colleges should unite, as they have lately done, in a recommendation that one or two foreign languages should be made a part of a regular grammar-school course, strikes me with astonishment. One would like to know whether the prodigious success that we have attained in the pursuit of foreign languages in our high schools prompted this sapient suggestion. Did they consider well the general competency of grammar-school teachers to give such instruction? Have they weighed the intellectual profit to be derived from pottering a year or two with the elements of another tongue?

Shortening and enriching the grammar-school course.—Charles W. Eliot, president Harvard University.[1]—I. We may properly use the term shortening in either of two senses. In the first place, the number of grades may be reduced from 10 to 9 or from 9 to 8, so that the combined primary and grammar-school periods shall end at 14 or 13; or secondly, the studies of the present course may be reduced in volume or in variety, or in both, so that there shall be room for the introduction of new subjects. I observe that both kinds of shortening have actually been begun in various towns and cities, and I believe that both are desirable, if not universally, at least in most localities. The argument for the first kind of shortening is a compact and convincing one—averaging the rates of progress of bright children with those of dull children being the great curse of a graded school. It is safer to make the regular programme for 8 grades and lengthen it for the exceptionally slow pupils than to make it 10 grades and shorten it for the exceptionally quick. In other words, since holding back the capable children is a much greater educational injustice than hurrying the incapable, the programme should be so construed as to give all possible chances of avoiding the greater evil. Without altering the nominal length of the programme in years, a great shortening of the course can be effected for part of the children simply by permitting the capable ones to do two years' work in one. I heard a grammar-school master testifying a few days ago in a teachers' meeting that nearly one-quarter of the pupils in his school (which numbers about 650 children) were successfully accomplishing this double task. Such a statement opens a cheerful vista for one who desires to see the grammar-school course both shortened and enriched.

With no more words about the first kind of shortening, I turn to the second kind, namely, the desirable reductions in the volume and variety of the present studies. The first great reduction should, I believe, be made in arithmetic. I find that it is very common in programmes of the grades to allot to arithmetic from one-eighth to one-sixth of the whole school time for nine or ten years. In many towns and cities two arithmetics are used during these years—a small one of perhaps 100 pages, followed by a larger one of 200 or 300 pages. Now, the small book ordinarily contains all the arithmetic that anybody needs to know; indeed,

[1] Read before the department of superintendence (Nat. Ed. Ass.) at Brooklyn, February 18, 1892.

much more than most of us ever use. Before a body of experts like this it were superfluous to enlarge on this proposition. On grounds of utility geometry and physics have stronger claims than any part of arithmetic beyond the elements; and for mental training they are also to be preferred. By the contraction of arithmetic, room is made for algebra and geometry. In a few schools these subjects have already been introduced, with or without mention in the official programmes, and they have proved to be interesting and intelligible to American children of from 11 to 13 years of age, just as they are to European children. Moreover, the attainments of the pupils in arithmetic are not diminished by the introduction of the new studies, but rather increased. The algebraic way of solving a problem is often more intelligible than the arithmetical, and mensuration is easier when founded on a good knowledge of elementary geometry than it is in the lack of that foundation. The three subjects together are vastly more interesting than arithmetic alone pursued through nine consecutive years. Secondly, language studies, including reading, writing, spelling, grammar, and literature, occupy from one-third to two-fifths of most grade programmes. There is ample room here for the introduction of the optional study of a foreign language, ancient or modern, at the fourth or fifth grade. Here it is to be observed that nothing will be lost to English by the introduction of a foreign language.

In many schools the subject of grammar still fills too large a place on the programme, although great improvement has taken place in the treatment of this abstruse subject which is so unsuitable for children. In the Beginner's Latin Book, by Messrs. Collar and Daniell, I noticed five years ago an excellent description of the amount of knowledge of English grammar needed by a pupil of 10 or 12 years of age about to begin Latin. Of course, the pupil who is not to begin Latin needs no more. All the grammar which the learner needed to know before beginning Latin was "the names and functions of the parts of speech in English and the meanings of the common grammatical terms, such as subject and predicate, case, tense, voice, declension, conjunction," etc. Manuals have now been prepared in considerable variety for imparting this limited amount of grammatical information by examples and practice rather than by rules and precepts; so that the greater part of the time formerly spent on English grammar can now be saved for more profitable uses. Thirdly, geography is now taught from books and flat atlases chiefly as a memory study, and much time is given to committing to memory masses of facts which can not be retained and which are of little value if retained. By grouping physical geography with natural history, and political geography with history, and by providing proper apparatus for teaching geography, time can be saved, and yet a place made for much new and interesting geographical instruction. Fourthly, a small saving of time can be made for useful subjects by striking out the bookkeeping which in many towns and cities is found in the last grade. This subject is doubtless included in the grammar-school programme, because it is supposed to be of practical value; but I believe it to be the most useless subject in the entire programme, for the reason that the bookkeeping taught is a kind of bookkeeping never found in any real business establishment. Every large business has in these days its own forms of accounting and bookkeeping, which are, for the most part, peculiar to itself. Almost every large firm or corporation has its own method, with printed headings, schedules, bill-heads, invoices, and duplicating order-books, adapted to its own business and intended to simplify its accounts and reduce to lowest terms the amount of writing necessary to keep them. What a boy or girl can learn at school which will be useful in after-life in keeping books or accounts for any real business is a good handwriting, and accuracy in adding, subtracting, multiplying, and dividing small numbers. It is a positive injury to a boy to give him the impression that he knows something about bookkeeping when he has only learned an unreal system which he will never find used in any actual business. At best, bookkeeping is not a science, but only an art based on conventions. As trade and industry have been differentiated in the modern world, bookkeeping has been differentiated also, and it is, of course, impossible to teach in school the infinite diversities of practice.

II. I have thus indicated in the briefest manner the reductions which may be conveniently made in some of the present subjects in order to effect a shortening of the present grammar-school programme. My next topic is diversifying and enriching it. The most complete statement of the new subjects proposed for the grammar-school programme is that made by the Association of Colleges in New England at their meeting at Brown University last November. That association then invited the attention of the public to certain changes in the grammar-school

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programme which it recommended for gradual adoption. These changes are five in number.

The first is the introduction of elementary natural history into the earlier years of the programme, to be taught by demonstrations and practical exercises rather than from books. The term natural history was doubtless intended to include botany, zoölogy, geology, and physical geography. Some room for these subjects is already made in most grammar-school programmes, and the recommendation of the association refers as much to methods of teaching as to time allotted to the subject. The association recommends that the teaching be demonstrative, and that adequate apparatus be provided for teaching these subjects. There is a lamentable lack of the proper apparatus for teaching geography in the public schools. Indeed, in many schools there is no proper apparatus for teaching geography or any other natural-history subject to young children. Natural-science apparatus has been provided in some exceptional high schools, but as a rule grammar schools are still destitute in this important respect.

The second recommendation is the introduction of elementary physics into the later years of the programme, to be taught by the laboratory method and to include exact weighing and measuring by the pupils themselves.

The third and fourth recommendations cover the introduction of algebra and geometry at the age of 12 or 13.

The fifth is the offering of opportunity to study French or German or Latin or any two of these languages from and after the age of 10.

III. Such are, in brief, the proposals for shortening and enriching the grammar-school course. I want to use the rest of the time allotted to me in discussing the objections to these various changes.

The first objection I take up is the objection to a reduction in the time devoted to arithmetic. Many teachers are shocked at the bare idea of reducing the time given to arithmetic, because they believe that arithmetic affords a peculiarly valuable training, first, in reasoning, and secondly, in precision of thought and accuracy of work. They perceive that the greater part of the school programme calls only for memorizing power and they think that arithmetic develops reasoning power. The fact is, however, that mathematical reasoning is a peculiar form of logic which has very little application to common life and no application at all in those great fields of human activity where perfect demonstration is not to be obtained. As a rule, neither the biological nor the moral sciences can make use of mathematical reasoning. Moreover, so far as mathematical reasoning is itself concerned, variety of subject is very useful to the pupils. The substitution of algebra and geometry for part of the arithmetic is a clear gain to the pupil so far as acquaintance with the logic of mathematics goes. Again, practice in thinking with accuracy and working with demonstrable precision can be obtained in algebra, geometry, and physics just as well as in arithmetic. It is quite unnecessary to adhere to the lowest and least interesting of these exact subjects in order to secure adequate practice in precision of thought and work.

The second objection is that there are children in the grammar schools who are incapable of pursuing these new subjects. Assuming that this allegation is true of some children, I have to remark, first, that we shall not know till we have tried what proportion of children are incapable of pursuing algebra, geometry, physics, and some foreign language by the time they are 14 years of age. It is a curious fact that we Americans habitually underestimate the capacity of pupils at almost every stage of education, from the primary school through the university. The expectation of attainment for the American child or for the American college student is much lower than the expectation of attainment for the European. This error has been very grave in its effects on American education all along the line, from the primary school through the university, and till within twenty years the effects were nowhere worse than at the college grade. It seems to me probable that the proportion of grammar-school children incapable of pursuing geometry, algebra, and a foreign language would turn out to be much smaller than we now imagine, but though this proportion should be large it would not justify the exclusion of all the capable children from opportunities which they could profit by. At the worst this objection can only go to show that it will be necessary to adopt in the grammar schools a flexible instead of a rigid system—some selection or choice of studies instead of a uniform requirement. Those children who are competent to study a foreign language should certainly have the opportunity of doing so at the proper age, that is, not later than 10 or 11 years; and those who are competent to begin geometry at 12 and algebra at 13 should have the chance. If experience shall prove that

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a considerable proportion of grammar-school children are incapable of pursuing the higher studies that fact will only show that the selection of appropriate studies for children by their teachers should be adopted as a policy by the public grammar school. To discriminate between pupils of different capacity, to select the competent for suitable instruction, and to advance each pupil with appropriate rapidity will ultimately become, I believe, the most important functions of the public-school administrator—those functions in which he or she will be most serviceable to families and to the state.

Another objection to the changes proposed often takes this form—they are said to be aristocratic in tendency. The democratic theory, it is said, implies equality among the children, uniformity of programme, uniform tests for promotion, and no divisions in the same schoolroom according to capacity or merit. I need not say to this audience that these conceptions of true democracy in schools are fallacious and ruinous. Democratic society does not undertake to fly in the face of nature by asserting that all children are equal in capacity or that all children are alike and should be treated alike. Everybody knows that children are infinitely diverse; that children in the same family even are apt to be very different in disposition, temperament, and mental power. Every child is a unique personality. It follows, of course, that uniform programmes and uniform methods of instruction, applied simultaneously to large numbers of children, must be unwise and injurious—an evil always to be struggled against and reformed, so far as the material resources of democratic society will permit. It is for the interest of society, as well as of the individual, that every individual child's peculiar gifts and powers should be developed and trained to the highest degree. Hence in the public schools of a democracy the aim should be to give the utmost possible amount of individual instruction, to grade according to capacity just as far as the number of teachers and their strength and skill will permit, and to promote pupils not by battalions, but in the most irregular and individual way possible. A few days ago I heard an assistant superintendent in an important city declare that many grammar-school teachers in his city objected to any division among the fifty or more pupils in each room; any division, that is, according to the attainments and powers of the individual pupils. They wanted all the pupils in a given room to be in one grade, to move together like soldiers on parade, and to arrive at examination day having all performed precisely the same tasks and made the same progress in the same subjects. If that were a true portrait of the city graded school it would be safe to predict that the urban public school would before long become nothing but a charity school for the children of the dependent classes. Intelligent Americans will not subject their children to such discipline when they once understand what it means. The country district school, in which among forty or fifty pupils there are always ten or a dozen distinct classes at different stages and advancing at different rates of progress, would remain as the only promising type of the free school. Not only is it no serious objection to the new proposals that they must diminish uniformity in schools—it is their strongest recommendation.

So far from the changes proposed being of aristocratic tendency, they are really essential to a truly democratic school system; for they must be adopted and carried into effect before the children of the poor can obtain equal access with the children of the rich to the best education they are capable of, whatever the grade of that education may be. Accessibility of appropriate opportunity is the essence of democratic society; not equality of gifts, attainments, or powers, for that equality is unnatural and impossible; not abundance of inappropriate opportunities, for such abundance is of no avail; but accessibility of such appropriate opportunities as the individual can utilize for his own benefit and that of society. The American grammar-school programme now actually prevents an intelligent child from beginning the study of a foreign tongue at the right age. We all know that that age is very early, long before the high-school period. It prevents him from beginning the study of algebra and geometry at the right age. It makes it impossible for him to get a chance at the right kind of study of natural science. If a boy is not to go to the high school, he loses that chance forever under our present system. If he is going to the high school he does not get the chance till much too late. The poor boy in the United States should have as good a chance as the child of a rich man to obtain the best school training which his character and powers fit him to receive.

Is not that a fair statement of what democratic society may reasonably aim at and seek to effect through its own grammar schools? Yet the existing grammar-school programme actually prevents the poor boy from getting that chance. The rich man can obtain for his children a suitably varied course of instruction,

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with much individual teaching, in a private or endowed school; but the immense majority of American children are confined to the limited, uniform, machine programme of the graded grammar school. A democratic society was never more misled as to its own interest than in supposing such a programme to be for the interest of the masses. The grades for pupils from 6 to 15 years of of age are an obstruction to the rise through democratic society of the children who ought to rise. Uniformity is the curse of American schools. That any school or college has a uniform product should be regarded as a demonstration of inferiority—of incapacity to meet the legitimate demands of a social order whose fundamental principle is that every career should be open to talent. Selection of studies for the individual, instruction addressed to the individual, irregular promotion, grading by natural capacity and rapidity of attainment, and diversity of product as regards age and acquisitions must come to characterize the American public school if it is to answer the purposes of a democratic society.

Fourth. It is further alleged that the changes proposed are chiefly for the advantage of the well-to-do children whose education is to be carried beyond the grammar school to the high school, and possibly to the college above the high school. They are indeed for the interest of this class of children; but they are more for the interest of the children who are not going to the high school, and for whom therefore the grammar school is to provide all the systematic education they will ever receive. The Association of Colleges in New England distinctly says that it makes its recommendations in the interest of the public-school system as a whole; "but most of them are offered more particularly in the interest of those children whose education is not to be continued beyond the grammar school." Take, for example, the subject of geometry. It has many and very important applications in the arts and trades. Every mechanic needs some knowledge of it. Its applications are as important as those of arithmetic, if we except the very simplest and commonest arithmetical operations. That the great mass of American children should leave school without ever having touched this subject, except perhaps in arithmetic under the head of mensuration, is a grave misfortune. To introduce variety into the grammar-school programme is in itself likely to profit the children who are never to go to school after they are 14 years of age even more than the children who are. A child who is dull in one subject may be bright in a different subject. Thus a child who has no gift in language may be keen and quick in natural-history studies. A child who has no taste for arithmetic may prove unusually strong in geometry. One whose mind is not easily moved through purely mental exercises may be intellectually developed through drawing and manual training. In college we are extremely familiar with these diversities, and the elective system is now giving in most American colleges free play for the profitable exhibition and cultivation of these diverse gifts. In a similar manner the grammar school will be better for even the dull and slow children if its studies are made more various and its whole system more flexible.

A fifth objection to the introduction of new subjects is that children are already overworked in school. In an address which I gave rather more than a year ago I pointed out that there are two effective mechanical precautions against the ill effects attributed to overwork at school, precautions which it is delightful to see are more and more adopted. They are good ventilation and the systematic use of light gymnastics at regular intervals during school hours. School time ought to be the best managed of all the day from a sanitary point of view, excepting those hours which the children pass out of doors. If the schoolroom were invariably healthier in every respect than the average home we should hear less about overwork at school. There is, however, a third precaution against overwork which is quite as important as either of those already mentioned: it is making the school work interesting to the children. Four years ago I asked the attention of this department of the National Educational Association to the depressing effect which lack of interest and conscious progress in school work has upon children. To introduce new and higher subjects into the school programme is not necessarily to increase the strain upon the child. If this measure increases the interest and attractiveness of the work and the sense of achievement it will diminish weariness and the risk of hurtful strain.

Lastly, there is an apprehension lest the introduction of the new subjects recommended should increase existing difficulties with regard to promotion. Parents are sensitive about the promotion of their children. They want the dull ones and the bright to be promoted at the same rate. Their sympathies are quite as apt to be with the slow children as with the quick. I believe that this practical

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difficulty should be met in part by the abandonment of uniform attainment or of a standard of required knowledge as ground of promotion. In Harvard College, where there is no such thing as a uniform programme of study for all students, and where, indeed, there is small chance that any 2 students out of 1,450 will pursue the same course of studies during their four years of residence, we have long since abandoned uniform attainment as ground of promotion from one class to another. The sole ground of promotion is reasonable fidelity. I venture to believe that this is the true ground of promotion in grammar schools as well, and that by the sole use of this principle in promoting the difficulty now under consideration would be much alleviated, if not done away with. The right time for advancing a child to the study of a new subject is the first moment he is capable of comprehending it. All our divisions of the total school period into years, and into primary, grammar, and high schools, are artificial and in most cases hurtful or hindering to the individual. The whole school life should be one unbroken flow from one fresh interest and one new delight to another, and the rate of that flow ought to be different for each different child. Economical school administration inevitably interferes somewhat with the desirable continuity and variety of motion, but the most skilful and wisest administration is that which interferes least.

On reviewing the progress of this reform since I had the honor of discussing the question, "Can school programmes be shortened and enriched?" before this department of superintendence four years ago, I see many evidences that a great and beneficent change in public-school programmes is rapidly advancing. The best evidence is to be found in the keen interest which superintendents and teachers take in the discussion of the subject. Through them the proposed improvements will be wrought out in detail, their influence will be successfully exerted on parents, committees, and the public press; and their reward will be, first, the daily sight of happier and better-trained children, and secondly, the elevation of their own profession.

Algebra and geometry in grammar schools—President Eliot criticised.—Edward Brooks, LL. D., superintendent of schools, Philadelphia[1]: The programme for "eight grades," as recommended by President Eliot, is almost universally adopted in our graded schools. In Philadelphia pupils enter the primary schools at 6 years of age, and have an eight years' course to complete the grammar schools. Very bright pupils are allowed to do it in less time. The same thing is generally true of the cities of the country; very few have a nine years' course; almost none a ten years' course. His suggestion of combining studies has also been adopted in many of our public schools. With primary grades it is a very common practice to unite geography and history, and with more advanced grades political and physical geography have usually been taught together for many years.

I doubt very much whether there is any advantage to be derived from the introduction of algebra into the grammar-school course. To the ordinary citizen in practical life a knowledge of algebra will be found of little value. No one buys or sells by algebra; and a knowledge of polynomials or the quadratic equation would be of little use to the housewife in the discharge of her duties. Indeed, no one of the mathematical branches would be of so little value in the ordinary practical affairs of life as algebra. Besides, we can not advocate the study of algebra on account of its disciplinary value, for no mathematical branch gives so little mental discipline that the ordinary business or professional man would find of use. As a disciplinary study the elements of algebra will be found to be far inferior to either arithmetic or geometry. Much of algebra is a mere calculus, and the aim of the student is to become expert with the manipulation of symbols, a form of mental operation entirely removed from that of ordinary life. In place of algebra I would urge a more general introduction of arithmetical analysis, usually known as mental arithmetic. This form of reasoning, originating with Warren Colburn, is better adapted to sharpen and strengthen the analytical powers of young students than any other branch of the grammar-school curriculum. It is far superior to algebra in developing the thought power of the student. It is also generally simpler and shorter in its methods of reasoning and operation than algebra. Take the problem that President Eliot gives, "The sum of 2 numbers is 24, and one is twice the other." I can obtain the results by the simple process of arithmetical analysis before the algebraist could write his equations. A problem like the following: "If A can do a piece of work in four days and B in six days, in what time can both do it?" is much more simply

[1] Reported in the Journal of Education.

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worked by arithmetical analysis than by algebra. And the same is true of a large number of problems. I urge, therefore, in place of algebra, that the beautiful system of arithmetical thought known as mental arithmetic be more fully introduced into our grammar schools than it is to-day.

The study of geometry as a science should not be introduced into our grammar schools. Concrete and practical geometry is already taught in most of our grammar schools under the head of drawing and mensuration. In most of these schools the pupils are made familiar with all the ordinary geometrical figures and their properties or principles. These principles include the methods of obtaining the areas of plane surfaces, the area and circumference of the circle, and the surface and volume of the parallelopiped, pyramid, cylinder, cone, and sphere. These principles are obtained, not by demonstration, but by concrete illustration, and they are applied by the children until they are familiar with them. This is all that it is practicable to do with geometry in the grammar schools. The pupils are not prepared for the logical processes of abstract geometry and can not understand them. The method of reasoning from axioms and established principles by the logical methods of geometry is too difficult for the ordinary student of the grammar schools. It is said that abstract geometry, with its demonstrations, is taught in the public schools of Germany and France; but in my examination last summer of the elementary schools of Paris corresponding to our grammar schools I did not find a single pupil studying the science of geometry. They apply the principles reached concretely, as we do in our grammar schools.

That the work of the grammar schools can be improved by shortening the course of study is a proposition that needs demonstration. That it may be enriched is a most desirable object, though it is a question whether this enrichment may not be attained by other means than the addition to or subtraction from the present course of studies. The broader question is, how shall the best results of culture and knowledge be attained in our grammar schools? The object can be attained by having a correct course of study, as rich in materials for intellectual, moral, and spiritual culture as is possible, and by having well-trained and skillful teachers to use this course of instruction to the best advantage.

Those German and French schools.—John T. Prince, agent Massachusetts board of education: President Eliot is clearly wrong in his impression of what is done in the elementary schools of France and Germany. Algebra and geometry are not in the schools that compare in any regard with our grammar grades. Algebra nowhere precedes geometry. The geometry taught is not demonstrative, but is more like that taught in the grammar and even in the primary grades here. The colloquial speaking of the Romance languages has no such value as these later reformers would place upon it. The whole difficulty lies in the fact that the grammar schools of Europe and America are compared by men who have not studied either.

The two ideals of the course of study.—W. T. Harris, commissioner: In the schools of the United States there prevail two different ideals of the course of study; the one originating with the directors of higher education and the other a growth from the common elementary school. These two ideals clash in quite important particulars. The common-school course of study, as it appears in the elementary school and in the public high school which gives secondary instruction, does not shape itself so as to fit its pupils for entrance to the colleges. At least, if we admit that as an actual fact many high-school pupils do enter college, we must also admit that there is a constant tendency in the pub ic high school to diverge in its course of study and follow a path that does not lead to the college.

The older colleges of the States, following the traditions brought over from Europe, built their course of study on mathematics and the classical languages, Latin and Greek. They accordingly demanded of the preparatory schools a preliminary training or preparation along these lines and neglected all else.

Human learning at one period did not include much that was not conceived and expressed in Latin or Greek words. But within the past 300 years there has arisen a modern tributary stream of human learning, and it has some time since begun its demand for recognition in the course of study. This modern side of human learning includes the natural sciences and modern literature. These two contingents are almost wholly the products of the past 300 years.

The demands of the sciences and the demands of the literature of the modern languages to a share in the course of study were met in one way by the college

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and in another way by the common school. The directors of higher education affirmed that Latin, Greek, and mathematics furnished the truly disciplinary studies fit for the foundation of all literal education. Modern literature and the sciences on the other hand were not and could not become culture studies, although they might be useful in the way of accomplishments in practical life.

Accordingly, the colleges proceeded to recognize the moderns by admitting them into the course of study at the end. During the fourth or senior year of college the student was given a rapid survey of the sciences and of some of the great works of modern literary art. But the college did not encourage the introduction of modern literature and natural science into the preparatory school. Consequently the pupil who left school during his preparatory course or before the senior year of college found himself ignorant of these two great and rapidly growing provinces of human learning.

But the public-school system has taken a different direction in the matter. It has been under the supervision and management of less highly educated men—that is to say, of men less thoroughly instructed in the forms of the past, and as a result less conservative. When the moderns appealed for a place in the course of study some concession was at once made to the demand. A tendency has been established to recognize the moderns throughout the course of study. First, modern literature was admitted in the shape of a graded series of school readers containing many of the gems of English and American literature, and much, too, that was written in mere colloquial English, and much that was trashy in its style and thought.

In the geographical text-book there was an attempt at a survey of the physical world in its relations to man, the world in its mathematical features of size, shape, and motions, in its physical aspects of interacting forces of light, heat, moisture, and gravitation, and finally, in its biological aspects of plant life, animal life, and the races of men.

This geographical text-book also drew on the social sciences and introduced scraps of information regarding political economy, the occupations of men, and also the political institutions, the laws and customs and religion. Geography has therefore developed from the beginning into a sort of compend of natural sciences, affording the pupil a survey of the results of the modern sciences, both in the physical and social world.

Having conceded to the demands of the moderns in the elementary school in these respects and in the introduction of a history of the fatherland, it remained next to emphasize this tendency still more in the secondary public school, and to make the high-school course of study include more thorough work in English literature, universal history, three or four selected sciences like geology, astronomy, physiology, and chemistry, in addition to the mathematics and some modern or ancient language.

It might be claimed that the graduates of the high school had a broader education; his education, under good teachers, might even be thorough, but certainly in his preparation in Latin and Greek the amount was not sufficient to give the high-school pupil a fair chance by the side of the graduate of the special preparatory school.

The directors of the common schools have therefore been compelled to establish a double course, a classical and an English course, in the public high school, a procedure so foreign to the spirit of the entire common-school course of study that it has only partially succeeded.

Adapt the high schools to the colleges.—Superintendent N. C. Dougherty, of Peoria, Ill.: What could be more natural than that the higher should reach down and adapt the lower to itself? The high schools are here to stay. If the education given by them in the past is not in all respects just what is needed, let us improve upon it. Let us make it better and better, as the years go by, until it shall supply just what is needed. Let us remember that we do the best for the boy who stops with a high-school education when we do nothing to impede the progress of the other boy who goes on to a college graduation.

The specific problem at the present time.—Nicholas Murray Butler: The marked difference at the present time between the general educational organization in this country and in Europe is to be found in the fact that in Europe the elementary school is not as a rule in complete coördination with the secondary school and the university; while in the United States the connection between the elementary and the secondary school is complete, but that between the secondary school and the university is wanting. Therefore the specific problem in educational organization that the American people have to deal with at the present

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time is the coördinating of the secondary and the superior instruction. This will be done by the high schools, the academies, and the colleges. In this organization the American college will always continue to occupy a prominent place. * * * The college should rest upon the high school, and should not raise its requirements for admission to such an extent that high school graduates may not pass easily and naturally into it. The contemporary demand for a shortening of the time devoted to obtaining both a college and a professional education is a sound one, and must be heeded. The shortening, however, should not take place at the expense of residence in college. That is in many ways the most valuable feature of American higher education. It can not be sacrificed without gravest loss. The problem can best be met by welding the college and the professional school together, and admitting certain preliminary professional studies, as electives, into the course leading to the degree of bachelor of arts.

Shortening the preparatory course.—President H. E. Webster, of Union College (N. Y.): Nothing can be better established than that the colleges are entirely dependent on the secondary schools for their support and success. If the schools are weak, inefficient, the college that draws from them can not have a high standard. The eastern colleges have been for many years demanding more and more of the preparatory schools. The requirements for admission to college have been increased; the age of graduation for the average student is much greater than it was in the past. Meantime, competition for places in life has become sharper than ever. And now the cry goes out, college graduates are too old; the course must be shortened; men must get into life earlier. And so they ought. But if a change is to be made, let it be in the requirements for admission to college, not in the length of the college course. Any college man will maintain that college life is worth more to a young man than life in a preparatory school, no matter how well conducted. As it seems to me, no greater mistake can be made than to shorten the college course. This, of course, for the average man. Every college course is arranged for the average man. The exceptional man—let him graduate whenever he has done his work.

There is one great trouble with the high schools. They are doing much of the work that ought to be done in colleges, and for this they have good grounds. Only a small number of students in high schools expect or intend to enter college. It is well that those who can not enter any higher institution of learning should receive instruction in many branches which properly belong in the college course. But in every such school there ought to be a course arranged for young men and women who do intend to "go up higher." The time of preparation would then be much shortened, because many subjects would be omitted. This would encourage students to go on with their education. For many years I was a teacher of natural science in various colleges. I say without hesitation that better work can be done (in colleges) with a student who comes fresh to the subject than with one who through his high-school training thinks that he understands the subject. I conclude in this wise:

In our high schools the teaching is excellent. All honor to those who give their lives to it. But there ought to be preparatory courses for colleges, including only such subjects as are required for admission in colleges.

That if any change is to be made so as to shorten the time for college students, it should be made in the preparatory course.

There comes a "moment of instinctive readiness" for every subject of study.—William James, professor, Harvard University: In all pedagogy the great thing is to strike the iron while hot and to seize the wave of the pupil's interest in each successive subject before its ebb has come, so that knowedge may be got and a habit of skill acquired—a headway of interest, in short, secured on which afterward the individual may float. There is a happy moment for fixing skill in drawing, for making boys collectors in natural history, and presently dissectors and botanists; then for initiating them into the harmonies of mechanics and the wonders of physical and chemical law. Later, introspective psychology and the metaphysical and religious mysteries take their turn; and, last of all, the drama of human affairs and worldly wisdom in the widest sense of the term. In each of us a saturation point is soon reached in all these things; the impetus of our purely intellectual zeal expires, and unless the topic be one associated with some urgent personal need that keeps our wits constantly whetted about it, we settle into an equilibrium, and live on what we learned when our interest was fresh and instinctive without adding to the store. Outside of their own business the ideas gained by men before they are twenty-five are practically the only ideas they shall have in their lives. They can not get anything new. Disinterested curiosity is past, the mental grooves and channels set, the power of assimilation

gone. If by chance we ever do learn anything about some entirely new topic we are afflicted with a strange sense of insecurity and we fear to advance a resolute opinion. But with things learned in the plastic days of instructive curiosity we never lose entirely our sense of being at home. There remains a kinship, a sentiment of intimate acquaintance, which, even when we know we have failed to keep abreast of the subject, flatters us with a sense of power over it and makes us feel not altogether out of the pale. Whatever individual exceptions to this might be cited are of the sort that "prove the rule."

To detect the moment of the instinctive readiness for the subject is, then, the first duty of every educator. As for the pupils, it would probably lead to a more earnest temper on the part of college students if they had less belief in their unlimited future intellectual potentialities, and could be brought to realize that whatever physics and political economy and philosophy they are now acquiring are, for better or worse, the physics and political economy and philosophy that will have to serve them to the end.

Modern studies may furnish a liberal education.—J. E. C. Welldon, head master Harrow School, England (in the Academy): Speaking generally, with the experience of a school in which a modern education has been tried on a large scale, I may give it as my clear opinion that the boys who have been educated in modern subjects deserve to be accredited with a liberal education in the same sense and to the same extent as other boys. In their intellectual characteristics, so far as I can estimate them, they are not altogether like the classical boys; but they are not inferior. * * * They are, in many instances, boys of keen and active intelligence. In the range of their culture and the discipline of their mental powers they are the equals of boys who have received a classical education; in the intellectual interest which they feel in their studies they are not infrequently superior. They win their share of the prizes and distinctions which are accorded to intellectual merit in public schools. If it is necessary to mention one particular point in which they sometimes fall below their classical rivals it may be said to be the habit of accuracy, of perseverance, and of sustained and concentrated attention to a subject which is not at once interesting and attractive and demands a large amount of patient, painstaking effort if it is to be effectively pursued.

Flexibility in courses of study—F. W. Parker, Cook County Normal School: A course of study is an arrangement of topics and subjects in the line of development. It shows the teachers the direction of work and is a general guide in the preparation of lessons. A course of study should be adapted to the abilities of teachers. An ironclad course of study that demands compliances in every detail is a dire means of compelling uniformity. The differing circumstances of pupils demand flexibility in the adaptation of a course of study. A class badly taught through several grades can not be made to follow a course of study without disastrous results. A course of study should be under constant discussion and should be changed when necessary. It should aid teachers in doing their best work.

IV.—EDUCATION.

Education should be adapted to individual requirements—Influence of heredity and environment.—President D. C. Gilman (Johns Hopkins), in the Cosmopolitan Magazine: Every boy differs from every other boy in character as he does in appearance. Even twins, while they closely resemble one another in many respects, may differ essentially in fundamental tastes and talents. Mr. Grafton says that extreme similarity and extreme dissimilarity are nearly as common between twins of the same sex as moderate resemblance. If this is confirmed, what becomes of heredity?

The corollary is obvious that plans of education should as far as possible be adapted to individual requirements; but as every boy is preparing for life among his fellows, and as Providence has so ordered it that he is strongly influenced by other boys, it follows that to treat him alone, away from comrades, in the backwoods, in a cell, under exclusive instruction, is only justifiable under extraordinary circumstances. He comes into the world not only as an individual with his own responsibilities and possibilities, but as one of a family, a neighborhood, a race, from which he can not be extricated except by death. Isolation is therefore as unnatural as it is undesirable and difficult.

Every boy is influenced both by his inheritance and his environment; yet the laws of heredity in the human species are not well enough known to give

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us any certain indications of what the child of any parents will become, while the conditions in which a person lives are as complex as the elements that nourish his body, the air he breathes, the water he drinks; as subtle and insinuating as the tones of the voice, the glance of the eye, the nod of the head, the pressure of the hand; as influential as religious faith, the forms of civil government, the habits of society, the lessons of antiquity, the examples of good men; and as trifling as a careless word, a thoughtless joke, a timely hint, a friendly warning, or a loving smile.

Seeking wisdom rather than knowledge.—Prof. C. A. Collin (in the University Magazine): The student undergoing the process of liberal education ought to pursue some studies in which he can not see any practical utility. His soul should grow and expand under the influence of quiet and unforced reflection and meditation which has no reference and in which he can see no reference to bread and butter. In this overpractical age the student's mind sometimes needs to be forcibly turned away from the pursuit of the practically useful to the cultivation of higher wisdom of greater value than is included within the range of what is ordinarily denominated practical. There is a certain influence from the study of Greek for which there is no equivalent. In every college or university there should be at least a small body of teachers and disciples to whom the life is more than meat, who are seeking wisdom rather than knowledge, and who, from the pursuits of philosophy, the reverence of the Lord, and the culture of the soul, gain the breadth of view, the clearness of vision, the warmth of heart, and the soundness of judgment which make the strong man; and who despise the mere keenness and agility of intellect which makes men shrewd and smart. There is no danger that men taking such courses of liberal education will be too numerous. By all means encourage every man who can take such a course and has the soul capable of receiving it to do so, whether afterwards he is to pursue a professional or a business career.

The bearing of heredity upon education.—Philadelphia Ledger: One of the most important truths which science has disclosed to us, and one which is replete with suggestions as to the conduct of life, is that of heredity. Instead of conceiving, as some have done, that each child came into the world like a blank sheet of paper, on which could be inscribed at will whatever characters we chose to imprint, we now know that he is a reproduction of past generations—the result of many combinations of character, with certain aptitudes, tastes, powers, faculties, and tendencies derived from his various ancestors. Just as some of his features are said to resemble father or mother, or more distant relatives, and some are combinations of several, so in his character will be represented certain qualities of one or of another, and often a mingling of many, which together produce an individuality all his own, yet gathered from past sources. It may be thought that if this be so there can not be much left for us to do. If each child is to reproduce the past in various forms, and under laws over which we can have no control, how can we hope to alter, by our interference, what is so irrevocably settled? How can we trace fresh characters on tablets already so full of permanent inscriptions? If heredity were the only element in the building of humanity, there might be force in such an inquiry; but this is not the case. Prof. Bradford, in the last number of the Educational Review, says: "Evolution works by two factors, namely, heredity, or that which tends to permanency, and environment, or that which tends to variation. The characteristic of the first is that it reproduces the past; of the second, that it adapts to new conditions that which has come from the past." This nature, so wonderfully complex, and so faithfully bearing within it the records of the past, is yet responsive to every touch from without. The environment or surroundings of the child or man always exert a potent sway over him. The influence of the air and the sunshine, of the climate, of town or country, of wealth or poverty, of civilization or barbarism, of care or neglect, of affection or indifference, of everything external, in fact, with which he comes in contact, is momentarily molding him into new forms, and modifying in various ways the nature which he has derived from the past.

Some of these influences are beyond our control, but many of them are within our power, and it is on this well-grounded truth that all our efforts at training, education, and self-culture should be based. Many of our failures in these attempts come from not bearing constantly in mind these two elements in every life. Every intelligent workman must have some appreciation of the materials with which he works. He must know what can and what can not be done with them if his skill is to be effective. To deal with them all alike and to expect

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that the same treatment will produce the same results would appeal even to the most ordinary laborer as an utter absurdity. Yet in the infinitely more intricate and complex nature of man, where no two minds or hearts or dispositions are exactly similar, how common it is to apply the same methods, to urge the same motives, to exert the same influences, to use the same drill, and then to be utterly astonished that the same results do not supervene. If the builder gave no more attention to the different varieties of wood than we give to the varieties in human nature we should justly deem him incompetent and untrustworthy. It is for this reason, far more than for any curious research, that the great principle of heredity should be studied in its manifold bearings by those who aim to train children, to influence men, or to improve themselves. If it is true, it is full of meaning to us all. It suggests that if we would make impressions, or form habits, or instill virtues, or correct faults, we must know something of the nature we thus attempt to influence. What may be effectual in one instance may be powerless in another and ruinous in a third, for the needs are as varied as the natures. It is because that which the individual inherits from past ages, while ineradicable, is yet being constantly modified by what comes to him from without, and because these two forces are always coöperative that he who would direct the one must understand the other. If it be said that this view fills the whole subject of education with difficulty, it can not be denied. But if it is a real and honest difficulty, who would bury it out of sight? Must it not be faced courageously and grappled with earnestly? The possible has always sprung out of what seemed at first impossible, and this is no exception. So far from producing discouragement, it opens up new fields for thought and for work, which afford the richest promises for future harvests.

The true ideal of education.—President O. D. Smith, of the Alabama Educational Association: The highest end of education is not the advantage of the power it gives a man for his own selfish uses or gratification, but it is to enable him to discharge the immutable obligations laid on him by his position in the world, by his relation to God and his fellow-man in all complex relations and activities of life. He who pursues knowledge solely for the sake of knowledge is little better than he who pursues money for the sake of money.

In our ideal of education and in our processes of working to that ideal we must not ignore the individuality of the pupil, his special talents and aptitudes. For his success and usefulness in life will be in working in fields of labor indicated by these special endowments. Therefore in his education those subjects should be selected as instruments of discipline and drill which will best develop them. Why waste time and effort to make a musician of one who has little musical talent or a mathematician of one who has no aptitude for mathematics? There is no Procrustean mold by which mind may be fashioned like castings in a foundry. It is not to be beaten, like iron, into a desired form by sledge-hammer blows of drill. Let the teacher also remember he can not create a faculty, or a power, or an aptitude that does not exist. Rather let the teacher direct his efforts to the development of those powers and faculties that respond most readily to discipline and drill in a vigorous growth and give promise of most fruitful results. This principle is being recognized in our educational institutions by wider latitude of selection in elective studies and in the differentiation of courses.

But in the selection of courses of study we should always be guided and limited by the true ideal of growth and development, and not sacrifice it to the mere acquisition of knowledge, however desirable. Let the teacher never forget that in real education we seek for results in the man himself. The object of disciplinary mental training is not to amass knowledge, but to enlarge, strengthen, and sharpen the mental powers.

While education and the acquisition of knowledge are generally coincident, they are by no means necessarily identical. It is a fact of common experience that a man may be educated in the true sense of the term without having acquired much knowledge. In fact, the amount of knowledge of any subject one can acquire at school is necessarily limited. So on the other hand a man may be a walking encyclopedia and yet have but little education, because such a man can not transmute his knowledge into power, into dynamic intellectual and moral force.

The question the busy, bustling, rustling world asks is not, How much does a man know? but, What is he? Every avocation and profession has a place for the man that is most, not the man that knows most. It is a matter of comparatively little importance whether he was educated at this or that school, or any school, whether he graduated from this or that college, or any college. The plain

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blunt question the world asks and has a right to ask is, How much is there of the man, how much to him, and in him? What can he do? Do in fields of labor, in the pulpit, at the bar, in the shop, on the farm, do in all the multiplied activities of life? This popular demand is playing havoc with certificates and diplomas.

The questions that confront the young men of to-day on the threshold of active life are not, Have you studied this, that, or the other brand of knowledge? but, What have they done for you? not, Have you been to school, the college, or university? but, What have these institutions accomplished for and in you? Have they made you men of thought, of persistent purpose, of executive ability, of moral and intellectual force, men whose capacities are so developed, so disciplined, under such command that you can put them to the best service in doing the world's work?

The world needs such men and will find a place for them. It is quick to recognize genuine education; as quick to reject the counterfeit, by applying the crucial test of power, the ability to do.

It seems to me, then, that the true ideal of education is the training, discipline, and development of the germ faculties of man existing in embryo in the child. It has been comprehensively defined, "the harmonious and equable evolution of the human powers." In a broader and deeper sense than we generally understand, "the child is father to the man."

A true ideal of education will correct the prevailing misapprehension as to what constitutes a "practical education." There is no gainsaying that our marvelous material development, the rapid increase of wealth, the abnormal thirst for accumulation, are seriously and dangerously affecting our ideals and methods of education. *Cui bono?* is the question on the ready tongues of pupils and parents. This question expresses a prevailing theory of education. It is the more dangerous because there is a modicum of truth in it, an apt illustration of the aphorism that "half truths are the most dangerous errors."

That the chief end of education is not to qualify a man to get a living is obvious, because life was given for a higher purpose than to toil for its own prolongation. It is, then, a grievious mistake to throw away life in the effort merely to get a living, or to throw away the preparation for life in the preparation to get a living. Real education sends one into the world tenfold better equipped to attain the very objects deemed so desirable by the advocates of the so-called practical education.

It is claimed to be especially adapted to the "industrial classes," a vague, illusive, and misleading expression, based upon the pernicious idea of class distinctions. So far as it has any meaning it includes all who do not belong to the "professions," *i. e.*, law, medicine, and the ministry. But I insist if there is any form of education that makes men stronger, wiser, nobler, the farmer, the artisan, the merchant, he who in any capacity is to be the director of labor, the controller of men, needs that education to its fullest extent. What the world needs and is asking for is not technical training and manual skill alone, valuable as these are, but, in the various industries, men of good brain, well-trained intellect, of stalwart vigor, men of conscience, of fair culture, of sound judgment, ready in business, in the market, in the forum, in the workshop, on the farm, to meet the obligations and discharge the duties pertaining to family and society, state and church. The true ideal of education recognizes and emphasizes the truth that behind the merchant, the mechanic, the farmer towers the man, and the man is more than his business or profession.

The distinction between practical and any other kind of education is unphilosophical. All real education from beginning to end is practical. Is not that education practical that develops a man's capabilities, that reduplicates him? Is it not of practical benefit to subject the intellect to those forms of study and training which will evoke its latent resources? Just so long as manhood is a force of practical value in whatever his business or profession, just so long must we account that education practical which augments and enriches it.

Let mere information take a secondary place.—James P. Munroe, in the Educational Review: It is not what we teach, it is how we teach, that is essential. In attempting to improve the public schools the mistake has been made of increasing the curriculum instead of the teaching force. Given the tools of reading, writing, and figuring, the good teacher will make one further study, if need be, serve every purpose of primary education. The mental vice of these newspaper days is superficiality. This vice the schools are doing much to encourage. Make the child accurate, thorough, persistent, logical, and let mere information take a secondary place. If he has acquired these qualities he has

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learned how to study; in teaching him how to study the school has done its work. Beyond giving him the tools of knowledge the primary teaching can do little toward increasing the child's stock of information. That will come to him outside the schoolroom. As said above, and as can not be too often said, the school is a gymnasium for making the child's mind acquisitive and receptive. The teaching of many subjects does not conduce to this. The immature brain is naturally restless and roving; it is for the school to give it the power of concentration. A child's mind is impatient and easily diverted; it is for the school to teach it patience and perseverance. A hasty clutching at many things is easier and pleasanter to both teacher and pupil than thorough mastery of one thing; but the child who has really conquered one subject is he who, in manhood, will win the knowledge of a thousand.

The constituents of a sound education.—President E. B. Andrews, of Brown University: Speaking succinctly, the constituents of a sound education are, first, character; second, culture; third, critical power, including accuracy and also sympathy with all the various ages, nationalities, and moods of men; and fourth, power to work hard under rule and under pressure.

We see that here mere knowledge is left out of the account. It is quite incidental and relatively insignificant. Yet, this is what most people have been wont to regard as the sum and substance of education. We see, too, that the question what studies are to be pursued is not mentioned, although many continually place it first. It is not unimportant. It would be pleasant to go into it deeply. Were we to do this, however, we should not enter the lists for the classics on the one hand, or for the sciences of nature on the other, but should urge rather the propriety of giving a much larger place in the curriculum than has ever been given hitherto to the political sciences. But the structure and material of the curriculum is not to-day the most pressing educational question.

The definition makes character part of education, and even gives it the first place. All reflecting persons are coming to feel that unless schooling makes pupils morally better, purer within, and sweeter, kinder, stronger in outward conduct, it is unworthy the name.

Culture comes next, by which is meant the power to apprehend and relish the beautiful in conduct, in art and literature, and in nature. Education must enrich life, not enlighten it merely. Culture stands in importance close to character, to which it is also very intimately related in essential nature, and it is far more to be sought than mere mental ability.

Third comes critical power, and mainly in the two great elements of accuracy and sympathy. Memorable ever is the thought of Cardinal Newman, that the principal part of a good education is accuracy. That one's mind is full signifies nothing unless the contents are definite and analyzed. A little knowledge well grouped and ordered comes much nearer the ideal education than infinite funds lying unassorted in the mind like so much raw ore.

To be accurate requires that of many things a finite mind should deliberately remain in ignorance. To read all the books relating even to a subject in which one is especially interested would be a positive disadvantage. Too much information in detail confuses the mind, confronting it with a blurred, indefinite picture that can be of no service to it, instead of those clear, crisp, comprehensible outlines which are so valuable. Large newspaper reading is deleterious to clear thinking beyond perhaps any other of the numerous causes operative in that direction at the present day.

Accuracy must be accompanied by sympathy, the power to draw near to men of all the different ages, civilizations, and temperaments, knowledge of the race, of the world, and of God. Here is where the importance of historical study comes in. "There is one mind," says Emerson, "common to all individual men. Every man is an inlet to the same and to all of the same. He that is once admitted to the right of reason is made a freeman of the whole estate. What Plato has thought, he may think; what a saint has felt, he may feel; what at any time has befallen any man, he can understand. Who hath access to this universal mind is a party to all that is or can be done, for this is the only and sovereign agent." The true scholar must enter into this mind; the door to it is sympathy; the latch, history.

An important element of sympathy is freedom from prejudice; the power not to dismiss unstudied or contemned a view which at first sight strikes you as strange or even as false. This power is one of the very best tests of a truly educated man. If you can not to a good extent feel with your opponent, you duly weigh his argument; and without this your disputing with him will but saw the air.

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With all these qualities must go self-mastery for each important purpose of life, the power to put and hold oneself to work, and to turn off large relays of intellectual or other work in a short time. This, too, is an essential ingredient in education.

We ask too much from [school] education.—Frederic Harrison, in the Forum: Many things work delightfully for good while they are spontaneous and unorganized, but when they are stereotyped into an elaborate art and evolve a special profession or trade of experts they produce unexpected failures and end in more harm than good. We ask too much from education, we make too much of it, we monstrously overorganize it, and we cruelly overload it. Education can do for us infinitely less than we have come to expect, and what little it can do is on the condition that it be left simple, natural, and free. I have known very few men who were made into anything great entirely by their education; and I have known a good many who were entirely ruined by it and were finally turned out as pedants, prigs, or idiots. Struggling to win prizes in examinations, thinking always about the style current to-day, being put through the regulation mill, and poring over some little corner of knowledge for some material object, may give a one-sided appearance of learning, with nothing behind it; will turn out mechanical eccentricitics like calculating machines; may change an honest fellow into a selfish, dull brute, or leave a weak brain softened and atrophied for life. And the more we organize education the greater is the risk of our finding this result.

The school reverses the plan of nature.—James L. Hughes, inspector of Toronto public schools (Canada): In the school of the future the pupil will originate most of the problems. The solution of problems is not so difficult as their conception. The power to recognize problems definitely is infinitely more important than the power to solve them. The most marked characteristic of childhood is its power to recognize the multitudes of new problems by which it is surrounded, and because this power is so strong it is therefore possible to develop it rapidly and definitely, and it was intended that it should so develop through the recognition of our material environment to the power of clear conception of all the problems connected with our intellectual and spiritual life.

Yet this power grows weaker instead of stronger as we grow older. The schools absolutely reverse the plan of nature. Before the child goes to school he discovers his own problems and solves most of them unaided. The few that he can not comprehend he brings to his seniors. When he goes to school his teacher brings the problems to him. Nature made a questioner, a seeker after truth; the school makes him an answer. Nature made his mind to think; the school makes it a receptacle for other people's thoughts. Nature gave him power to see the relationships between himself, and his environments, and his fellow-men, and his Creator; the school dwarfs this power by preventing its activity. We are often startled at the simplicity of new discoveries and inventions, and we wonder why we did not make them ourselves. Every new discovery or invention is merely the solution of a new problem in the relationship of natural forces. The power of solution depends on the power of recognition. We could have solved the problems if we had been definitely conscious of them. They were near us but we did not see them. If we had the power to see clearly the thousands of physical, intellectual, and spiritual problems that are ever near us, how swiftly the world would move onward; how definite would be our conscious growth towards God. But the schools train men to solve, not to find problems; to answer questions, not to recognize the mighty questions that need answering, and so there is not so much power of original investigation and independent growth in the world as there should be. The school of the future will preserve and develop the child's conceptive relationship to nature and God, intellectually and spiritually.

Fear has its place in the training of the will.—Report of committee of National Council of Education, George P. Brown, chairman: There is a prevailing sentiment that incentives suggestive of pain are to be abolished from our curriculum of will-training. The anticipated pleasures of right doing are to be substituted everywhere for the anticipated pains of wrongdoing. This finds expression in some large cities in the abolition, by order of the school authorities, of all punishment. The pulpit is influenced by this sentiment oftentimes to the extent of ignoring punishment for sin. The family is often dominated by the child's impulses for the reason that it is unable to make desire, reverence, or interest effective in giving dominance to ideas of obedience, and it rejects the incentive of pain as brutal. It is the conviction of the writer of this paper that fear has its place among the incentives in the early training of the will.

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Original thinking wanted.—G. Stanley Hall: I would rather have a boy who has but little training in college attempt to add something to the world's knowledge than to attempt to attain a high state of learning.

What the young should know in advance and realize.—William James, professor Harvard University: Attention and effort are, as we shall see later, but two names for the same psychic fact. To what brain processes they correspond we do not know. The strongest reason for believing that they do depend on brain processes at all and are not pure acts of the spirit is just this fact, that they seem in some degree subject to the law of habit, which is a material law. As a final practical maxim relative to these habits of the law we may then offer something like this: Keep the faculty of effort alive in you by a little gratuitous exercise every day. That is, be systematically ascetic or heroic in little unnecessary points, do every day or two something for no other reason than that you would rather not do it, so that when the hour of dire need draws nigh it may find you not unnerved and untrained to stand the test. Asceticism of this sort is like the insurance which a man pays on his house and goods. The tax does him no good at the time and possibly may never bring him a return. But if the fire does come his having paid it will be his salvation from ruin. So with the man who has daily inured himself to habits of concentrated attention, energetic volition, and self-denial in unnecessary things. He will stand like a tower when everything rocks around him and when his softer fellow-mortals are winnowed like chaff in the blast.

The physiological study of mental conditions is thus the most powerful ally of hortatory ethics. The hell to be endured hereafter, of which theology tells, is no worse than the hell we make for ourselves in this world by habitually fashioning our characters in the wrong way. Could the young but realize how soon they will become mere walking bundles of habits, they would give more heed to their conduct while in the plastic state. We are spinning our own fates, good or evil, and never to be undone. Every smallest stroke of virtue or of vice leaves its never so little scar. The drunken Rip Van Winkle, in Jefferson's play, excuses himself for every fresh dereliction by saying, "I won't count this time." Well! he may not count it, and a kind Heaven may not count it; but it is being counted none the less. Down among his nerve cells and fibers the molecules are counting it, registering and storing it up to be used against him when the next temptation comes. Nothing we ever do so is, in strict scientific literalness, wiped out. Of course this has its good side as well as its bad one. As we become permanent drunkards by so many separate drinks, so we become saints in the moral, and authorities and experts in the practical and scientific spheres, by so many separate acts and hours of work. Let no youth have any anxiety about the upshot of his education, whatever the line of it may be. If he keeps faithfully busy each hour of the working day, he may safely leave the final result to itself. He can with perfect certainty count on waking up some fine morning to find himself one of the competent ones of his generation in whatever pursuit he may have singled out. Silently, between all the details of his business, the power of judging in all that class of matter will have built itself up within him as a possession that will never pass away. Young people should know this truth in advance. The ignorance of it has probably engendered more discouragement and faint-heartedness in youths embarking on arduous careers than all other causes put together.

What every boy is entitled to know.—President D. C. Gilman in the Cosmopolitan: Until he reaches maturity every boy requires positive guidance from those who have had a longer experience in the ways of the world. It is always cruel, and it may be criminal, to allow a youth to experiment for himself upon conduct—to say that he must sow his own wild oats, that experience is the best teacher, that he must choose his own course. Every boy is entitled to know what older persons have discovered of the laws of conduct, and to receive restraint, caution, and warning until his eyes have been opened and his power of judgment developed. Nobody questions that he ought to be taught the laws of health, of diet, of poisons, of climate, or the laws that protect his person and his property; and it is surprising that anybody should question his right to initiation, by stringent discipline, into the laws of intellectual and moral well being. Every boy, whether he wishes it or not, should be trained. Yet the contrary doctrine is covertly held, if not openly avowed, by many a tender mother and by many a generous father. Note the autobiography of John Stuart Mill.

Too intense introspection not wanted.—President Gilman (*Ib.*): The influence of modern psycho-physiological inquiries upon the coming generations is still undetermined. The good that is aimed at may perhaps surpass the evil that is,

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done. Certainly, in these days when morbid self-consciousness, extreme sensitiveness, bashfulness, shyness, and timidity are so frequently apparent, the wise parent, the wise teacher will hesitate before encouraging in his own family or his own school too intense and too prolonged introspection. Give the boys plenty of open air, and when they can not have this, encourage within-doors exercise in handcraft, the use of tools, and knowledge of the book of sports, not to the exclusion of other studies, but as collateral security that the mind and the body shall be simultaneously developed. * * *

Healthy, out-of-door lives, directed toward objects of enjoyment, of observation, of sport, of acquisition, are better for boys than exclusive devotion to books, and especially than habits of introspection, self-examination, casuistry, journal writing.

Home and school training contrasted.—James P. Munroe, in the Educational Review: The home and the school are two wholly different forces brought to bear upon the growing child. Each has its proper sphere, and the methods of the one have no place in the system of the other. Judiciously exerted, one supplementing the other, these two influences should produce patriotic, moral, well-balanced citizens. No argument is needed to prove the unfitness of school methods to home training; there should be no need of proof that home methods have little or no place in the school. The child whose parents treat him from the standpoint of the pedagogue is a pitiful creature, starved morally, surfeited mentally. A child who has been trained in a "home" school, by methods which have no right beyond the walls of a house, is even less well fitted for good citizenship. Home training should be always indirect, persuasive; school training direct, authoritative. Home must be suggestive; school training, mandatory. Home training should be mainly by example; school training by fact and precept. Home training must leave free play to the child's mental growth; school training must prune and control that growth. The home fits the child to be a man, the school prepares him to be citizen; one is natural, common to humanity, the other artificial, peculiar to the state. It is seldom that the proper combination of these two elements is reached. * * * The right moral training tempers love with duty and duty with love. This moral training can be perfected only within the home. School life is but a mental gymnasium in which to make the child receptive and acquisitive.

To be preferred to any sort of learning.—Locke: Under whose care soever a child is put to be taught during the tender and flexible years of his life, this is certain, it should be one who thinks Latin and languages the least part of education; one who, knowing how much virtue and a well-tempered soul is to be preferred to any sort of learning or language, makes it his chief business to form the mind of his scholars and give that a right disposition, which if once got, though all the rest should be neglected, would in due time produce all the rest; and which, if it be not got and settled so as to keep out ill and vicious habits, languages and sciences and all the other accomplishments of education will be to no purpose but to make the worse and more dangerous man.

The great end of all teaching.—Tate's Philosophy of Education: Without losing sight of the importance of practical knowledge, especially at the later stages of elementary instruction, the truly enlightened educator will ever regard the development of the faculties as the great end of all his teaching; but from the various useful matters of instruction he will always select that which is best calculated to secure this end, and his mode or system of teaching will always have a reference to the same great end. The question with him will not be, Have I conveyed the greatest amount of technical knowledge in the least time? Have I engrafted the ideas of the man upon the mind of the boy? but it will rather be, Have I awakened any element of intellectual or moral vitality which had hitherto lain dormant? Have I invigorated or purified any faculty which had hitherto existed in a feeble or in an imperfect state of development? And has all this been attained with a due regard to the future pursuits and destiny of the pupil?

As to self-education.—Charles A. Dana: The worst school that a man can be sent to (and the worst of all it is for a man of genius) is what is called a self-education. There is no greater misfortune for a man of extraordinary talent than to be educated by himself, because he has of necessity a very poor schoolmaster. There is nothing more advantageous to an able youth than to be thrown into contact with other youths in the conflict of study and in the struggle for superiority in the school and in the college.

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V.—Higher Education.

College-bred men in the business world.—Andrew Carnegie: The total absence of the college graduate in every department of affairs should be deeply weighed. I have inquired and searched everywhere in all quarters, but find scarcely a trace of him. Nor is this surprising. The prize-takers have too many years the start of the graduate; they have entered for the race invariably in their teens—in the most valuable of all the years for learning anything—from 14 to 20. While the college student has been learning a little about the barbarous and petty squabbles of a far-distant past, or trying to master languages which are dead, such knowledge as seems adapted for life upon another planet than this as far as business affairs are concerned, the future captain of industry is hotly engaged in the school of experience, obtaining the very knowledge required for his future triumphs. I do not speak of the effect of college education upon young men training for the learned professions; but the almost total absence of the graduate from high position in the business world seems to justify the conclusion that college education as it exists is fatal to success in that domain. The graduate has not the slightest chance, entering at 20, against the boy who swept the office, or who begins as shipping clerk at 14. The facts prove this.

Henry Clews: I have given it some thought, and my conclusions are the result of experience. I might say in beginning that I do not employ college men in my banking office. None need apply. I don't want them, for I think they have been spoiled for business life.

After spending several of the best years, the years when the mind is most active and most open to impression, in learning a lot of things which are utterly useless for business, they come to the cities to make their way in the world. They are perfectly ignorant of business methods. Their whole education has tended to shut their minds to knowledge of this kind. While they have been at college other men have been in the business offices, have begun at the bottom and have worked up, learning all the details, getting that knowledge which can not be set down in books.

Now, the college graduate is not willing to begin at the bottom. He looks down on the humble place which he is fitted to fill. And, indeed, he looks down on all business as dull and unattractive. He wants a place such as his education and his years seem to command. This place he can not get, for he has as yet the A, B, C's of business to acquire.

And even if he does bring himself to accept the place, which he must accept if he would have any measure of success, he does not utilize it in a way to advance. His thoughts are not with his business, but with his books, literature, philosophy, Latin. Now, no man can approach the exacting business life in this half-hearted way. Business requires the undivided mind.

Winthrop D. Sheldon, in the New Englander and Yale Review:[1] It is not less education, but more and better, that is needed in business life, an education that is so all-around as to give a larger success than the mere accumulation of a fortune. Hitherto such have been the unexampled opportunities for fortune-making, always to be found in a new and undeveloped country, that multitudes of men have "stumbled" into wealth, not because of any special capacity of their own superior to that of their neighbors, but by some happy accident. The attainment of riches by no means proves that a man possesses superior ability in any large sense of the term. Indeed, it has been well said that very often the rich man in a community is conspicuously stupid, ignorant, and narrow-minded outside of his special sphere. This is the natural result of a lifetime's "money-grubbing," when all of a man's thoughts and energies are concentrated upon the one object of making money for money's sake. If it be true that comparatively few of the college-educated win a great fortune, it is doubtless due in great measure to the fact, which is much to their credit, that such men have too many and diversified intellectual interests to be able or willing to turn themselves into mere money-making machines. Thereby the community at large is greatly the gainer and its common life is preserved from becoming mercenary and sordid. * * *

Does it not involve a serious impeachment of the standards of business capacity to maintain that a youth of 14, who goes at once into a store, his mental powers as yet comparatively undisciplined, and spends the next few years in

[1] The other extracts upon this subject given in this connection were compiled by Mr. Sheldon in illustration of his argument in the New Englander. Most of them appeared originally in the New York Tribune in reply to Mr. Carnegie's assertion.

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sweeping it out, running of errands, and tying up bundles, is more likely to achieve a pronounced business success than the college graduate, who meanwhile has been schooling himself to accurate thinking, cultivating his powers of observation and reflection, storing his mind with a wide range of knowledge and bringing it into permanent relation with those things which adorn and dignify our lives and make them really worth the living? The education of the store and the counting room or the shop, exceedingly valuable in its way, is in the comparison essentially narrow in its scope; and, narrow and narrowing, it is going on during the very years when the question is being determined in the case of most persons whether their future life is to be of a narrow or of a broad gauge pattern. The great mass of business men are men of mere routine; they are made such by their lack of a thorough general education and by the narrow lines of their early training, and the trend of their lives is to confine them in this mental bias. The man who brings to the routine of his work a broadly trained intelligence will be worth in the long run a great deal more than he who for lack of such intelligence is a slave to routine.

President Seth Low, of Columbia College (who has been himself a business man): While it is harder for a college graduate to get started in business than for one who enters it as a boy, in five years from the time he does start, other things being equal, the college graduate will be the peer in business of his friend who began as a boy, and while equally successful in business he will fill a much larger place in the community than the one-sided man can ever hope to fill.

James W. Alexander, a Princeton graduate and vice-president of the Equitable Life Assurance Society of New York: However it may be with the boy whose talents, temperament, and environments are such as to limit his prospects and ambition to a life of physical labor in a subordinate capacity, who can doubt that the boy who has within him the germ of some future master in affairs will be all the more of a leader by reason of a thorough college education and even that he will outstrip in the mere matter of time the boy whose only training was sweeping the shop or adding up columns of figures at a desk? It is the successful men we are talking about. And when the shop-bred boy reaches the high station to which his abstention from college education has assisted him, does it require argument to prove that he would be a more useful, a more influential, a more attractive man if he could have added to and combined with his industrial training that knowledge, science, literature, and philosophy to the mastering of which the college is the open door?

Mr. Charles L. Colby, a graduate of Brown University and president of the Wisconsin Central Railroad: I admit a man may succeed in banking or business without an education, but I earnestly believe that if two men of equal ability start together in the race, one an educated man and the other without college training, the college man will win every time in the long run. Machinery and methods are constantly changing. The uneducated do not readily comprehend them and must be instructed step by step. The more a man is educated, the more readily he adapts himself to these sudden changes in business methods. When it comes to the scientific, technical, brain requirements of a calling, the college man moves easily ahead.

Mr. Daniel Heald, a Yale graduate and president of the Home Insurance Company of New York: I believe the success I may have attained in the world is directly due to my college training. I there acquired system, analysis, and methods of thought that have been of inestimable value in life. If nature has given a man fair talent education will make better a man of him and positively aid him in his daily work. Suppose a boy is going into any manufacturing business—making pumps, for example. Give him an education. He will make better pumps because of it. Strip the rich, uneducated man of his wealth and what is left? What we want in American life is the ripe, well-rounded man of affairs.

Gen. Brayton Ives, a Yale graduate: Given a boy with a natural aptitude for business, his college training, particularly in methods of thought, will afterward be of such practical aid as more than to offset the loss of those years in business. Observe that learning how to learn is the summarized advantage of a college training; that is, it is the discipline which the boy obtains at college that enables him to learn after he leaves college and learn more rapidly, readily, and intelligently than his uneducated competitors. I can trace every step in my own career to the influence of my college course, and as every man can, of course, speak best of his own life, it is not egotistical to be personal. I was graduated from Yale in 1861, entered the Army, and instantly found my training of the utmost benefit. Being accustomed to study, I mastered the tactics more easily and in less time than was required by men whose minds had not been trained.

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This enabled me to compete with men who had been there much longer than I and was the cause of much more rapid promotion than I could have gained otherwise. All the progress I have since made in civil life, including that of my present occupation—banking—is directly traceable to the special advantages afforded by my education. A man of ability educated is better, no matter where he may be placed, than a man of ability uneducated.

Chauncey M. Depew, a Yale graduate: Have the eight years passed in the preparatory school and the university, acquiring many things which would be useless in the factory or store, been thrown away? My observation leads me to directly the contrary opinion. The college-bred man, under equal conditions of capacity and health, has a trained intellect, a disciplined mind, a store of information, and a breadth of grasp, with the fearlessness which it entails, that enable him to catch up with and pass his rival. Hundreds of college graduates within the last five years have begun in the various departments of railway work at the bottom. They were firing on the locomotives, working in the machine shops, switching in the yards, keeping books in the treasurer's office, serving in the freight and passenger departments, and my observation of them for this period has demonstrated the value of a college education. It used to be a popular theory that strong men who had won great places in the business world would have been ruined if they had been educated. The better belief is that on account of genius and special capacity they succeeded in spite of their disadvantages. It is the old question of the trained boxer, runner, athlete, debater, soldier, as against unskilled strength and courage. Whatever the popular delusions, in the trials there never has been but one result.

Winthrop D. Sheldon: Mr. Carnegie must have been gazing at the mountains and craters of the moon, inquiring and searching there, when he asserted the "total absence of the college graduate in every department of affairs." Had he taken pains to look about him he would have found successful college-bred men of business almost under the eaves of his factory in Pittsburg itself. If inquiry were to be made every important commercial or manufacturing center would furnish some conspicuous examples of the college man of affairs. Mr. James W. Alexander, from whom we have already quoted, reënforced his views with a list of 65 college graduates prominent in business circles and selected at random, mostly from New York and vicinity, and other names almost if not equally as significant will occur to every observant person. From an analysis of the list we notice that there are 15 railroad officials, including, besides vice-presidents and general managers, 6 presidents, among them Chauncey M. Depew, of the New York Central system; Charles Francis Adams, of the Union Pacific; Austin Corbin, of the Philadelphia and Reading, recently chosen president of the New York and New England; and to these we may add the late Frederick Billings, at one time president of the Northern Pacific; the late Levi C. Wade, of the Mexican Central, and Presidents Bishop and Watrous, of the New York and New Haven Railroad. There are also 18 bankers, including a number of bank presidents, 10 manufacturers, 10 merchants, 7 heads of prominent trust and insurance companies, and 5 heads of leading publishing houses. Certainly neither the late Alexander T. Stewart, the prince among dry-goods merchants, nor the late John Jacob Astor, who had the reputation of being an excellent business man, found the education which they obtained, respectively at Dublin University and Columbia College, any impediment whatever in the way of their success. It is said of the former that he retained his interest in his college studies to the latest years of his life.

Mr. Sheldon sums up as follows: The great mass of those who enter the various occupations of the business world could not, if they would, receive a college education. Most of them would not improve the opportunity if they had it, and it would be of no advantage to most, because they are not fitted to profit by it. But the youth who can have such an education, and is fitted to profit by it, is on no account justified in rejecting the opportunity for fear it will incapacitate him for a successful business career. Let him get all the education he can, in the full assurance that he will be more of a man, and therefore, more of a business man; not a man of an affair, but a man of affairs. For what men are in any one phase or province of their lives is largely determined by what they are in every other. No part of the individual life can escape the uplift which a thorough education gives to the entire being. And the young graduate who decides to set his face towards a business career has no occasion to look upon the four years of his college life as thrown away or to feel that he is handicapped in the race for success. It is not necessary for him to begin where the boy of fourteen begins, whose age and lack of training unfit him for anything higher than plying the broom and

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running of errands. His age, mental training, and general maturity enable him to apply himself at once to the study of business methods themselves. Nor can any fixed rule be laid down as to the length of his novitiate. That will vary according to his ability, industry, and power of adaptation, and also according to the nature of the business which he has undertaken to learn. It may, in some instances, be only months; it may require years to master all the details. But as he proceeds the practical value of his education will become more and more apparent. The success of college-bred men who have adopted a business career will compare favorably with that of business men in general. They have been successful, not in spite of their education, but in part because of it. Education is no magic key that of itself unlocks the doors of success in any department of life; but in business, as in other occupations, if joined to health, industry, energy, and common sense it will win a success of finer mold and more enduring, more satisfying quality; it will be its own justification.

Old vs. *new institutions of learning.*—President G. Stanley Hall, of Clark University: Age which brings wisdom may bring infirmities. In a time and land where change is so rapid trustees, alumni, and even faculties sometimes fall behind. Time is lost in administrative details better left to one. Young men are held back, and talent not held to its best thing, but kept doing the work of cheaper men, and the question may become pertinent why, with vast resources, so little is done for culture and for the advancement of knowledge by old institutions or comparatively so much by new ones. There is much to foster complacency and an unfortunate absence of competent criticism from without, whence all university reforms in history have really come. Prejudices may accumulate from without, and student custom and ideals grow up within that are as inveterate and ineradicable as they are vicious and absurd, but which make progress slow and hard. There is sometimes an excess of conservations, routine, and machinery. Saddest of all, perhaps, departments of endowed knowledge, like professors, sometimes cease to be productive and grow dry, formal, sterile, but they can not be displaced. It may be harder to regard an old institution as a means, precious only as it broadly serves the highest culture-interests of the whole nation, and not as an end precious in and for itself. We know how wasteful and unproductive the vast resources of Oxford and Cambridge had become in 1854, and what old abuses had to be corrected in Italy and Holland by such and other somewhat drastic outside means. In this new country we need new men, new measures, and occasionally new universities; and we, like England, have in later years experienced their amazing good. In the field of experimental science, unlike some other departments, what is there of importance, that a few centuries can afford, that can not be at least as well provided in a few years?

The differentiation of higher educational institutions urged.—G. Stanley Hall: We [at Clark University] duplicate almost nothing in other universities in this country. A full department of physics, chemistry, or mathematics even, to say nothing of biology, the complexity of which is more obvious, as sketched for us by several European leaders in their field, would each require several professors, each with one or more assistant professors to represent its several sections or departments of the subject. Thus, to say nothing of difference of grade or standard, it does not follow, because we have physics, chemistry, and other departments found in other institutions, there is duplication. The contrary is, in fact, the case. The best professors in their fields, however authoritative they may be in the entire department, excel in and contribute chiefly to but a few chapters of it, leaving ample space for other directions of excellence elsewhere.

In the new era of university development, upon which this country is now entering, it is of fundamental importance for economy and for the success of a great movement that, in place of the monotonous uniformity, duplication, and servile imitation that has prevailed, institutions should freely differentiate and should be known to do so; that above the commendable loyalty to local institutions by their graduates, there should arise the same comparative and critical discrimination of institutions as of courses in the same institutions under the elective system. Perhaps the chief benefit of the latter has been the stimulus it gave to every professor to make his course so profitable that it should prove attractive to the most of the best students. The same stimulus could be given to institutions by the extension of the elective system to them.

What a real university is.—Nicholas Murray Butler: The university is a wholly different institution from the college, and while in this country we have scores

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of nominal universities, the real ones may be counted on the fingers of a single hand. A college in which the course of study is elective wholly or in part is not a university. A group of professional or technical schools is not a university. A college and a group of professional and technical schools taken together is not a university. A university must have for its heart and soul the great philosophical faculty of the Germans; the faculty which finds its reason for existence in the preservation of the humanities and in a careful and loving study of philosophy, philology, and letters. A university is marked by the time-honored freedom in teaching and freedom in study; it knows no trammels, no compulsion. It is not a disciplinary institution, but rather a field for research and investigation. At the university the bounds of knowledge will be continually widened and the leaders of the future generation in science and literature trained to their work. Professional schools or faculties, apart from the philosophical faculty, have always become technical and narrow—it is the philosophical faculty that is the real university center. Its spirit and insight must regulate and inspire all of the associated faculties.

VI.—KINDERGARTENS.

The kindergarten the great remedy for formalism in the primary school.—W. T. Harris: The school teaches the conventionalities of life; it gives the child access to the wisdom of the race, but it often errs in making its experiences to the child too formal. It is too rigid and unsympathetic, and the child is expected to throw off the freedom of the family at once, and all too soon assume the formalities of the world. Thus did the great need of a connecting link between the two call for some noble-hearted lover of his kind to suggest a change, and Froebel, whose memory all kindergartens, all true educationalists reverence, came to the rescue and supplied the need. The kindergarten takes the little one in his tenderest years, and by placing within his reach symbols and games suited to his comprehension, enables him to naturally, and without undue or forced effort, grasp and assimilate the ideas and teachings desired. It makes him notice what is going on in the great world around him, and seeing begets the desire to imitate. It leads him up from the initial stage of feeling to thinking, and from thought to action. But the games and plays are only a portion of the work; there are gifts and occupations. These are less symbolical and more logical, and train the quantitative faculties. A child does not readily realize what it means to think quantity; it is a hard and awkward step for him to take, and the idea of number, for instance, must be learned not by starting at a unit and adding, but by taking a divisible unit and dividing it; and thus Froebel, who perceived this point, introduced the divisible block. The kindergarten is the great remedy of this century for the formalism of the primary school, and it had been badly needed before it came to the rescue.

What children have a right to expect from the kindergartner.—W. E. Sheldon: Children have a right to expect that their individuality shall be recognized and respected; that their natural and hereditary traits shall be taken into account in their training; that all manifestations of interest in their development and culture shall be genuine; that an active and progressive intelligence shall be supplemented by a well-balanced self-poise of the trained kindergartner which the child will soon discover to be an element of true manhood or womanhood worthy of imitation; that their many questions shall be regarded as of importance and that the replies shall stimulate further respectful inquiries. Questions are the natural openings of the child's mind, which natural inclination prompts, and aid the teacher in the work of instruction. You should convince the learner that all proper inquiries are in order at suitable times and that it is a pleasure for you to answer them. If the inquisitiveness becomes unprofitable in character or in frequency use your best tact as the means of restraining it. Let the child appear to exercise the right of personal liberty and yet not gratify what may be really an unworthy curiosity.

Some straws.—The report of Superintendent Cassidy (Lexington, Ky.) declares the greatest need of the schools to be kindergartens.

Dr. James Mac Alister: To my mind to-day no problem is so important as the kindergarten universal.

Superintendent W. H. Love (Buffalo, N. Y.): The first change to be attempted in our school reform is to bring in the kindergarten or subprimary work.

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VII.—Manual and Industrial Training.

Effect of industrial education upon general education.—Prof. Felix Adler: During an experience of 12 years in the application of manual training in the teaching of children between 6 and 14 years of age, I have observed that manual training in the ordinary school is the means of saving those children who are plainly and obviously deficient in what may be called literary quality. There are many children who are very slow in reading, in arithmetic, and in history, and it has been my observation that these children, especially numerous among the poorer classes, are at once stimulated intellectually by the opportunities of the school workshop. It has been my invariable experience that children who are slow in their progress in reading and history and mathematics are very quick in natural history and in drawing and in the workshop. Especially has the conjunction of a talent for natural history and for manual training frequently impressed itself upon me. The effect has been to stimulate these children not only in manual training and in natural history, but, awakening their self-confidence and self-respect, to stimulate them generally. Those boys who, in an ordinary public school, would be set down as dunces because they make no progress, and who would begin to consider themselves dunces after a while, find themselves *facile princeps* in the shop and in natural history, and gain the respect of others and take a new start. The best work in modeling and manual training in the school of which I have charge has been done by such pupils. Surely, therefore, this is an argument in favor of introducing manual training from the point of view of general education. If manual training can promote the intellectual training of a very large number of children defective on the intellectual side, that is a sufficient reason why it should be introduced.

Another result of my observation has been that the school-workshop is a means of strengthening the mathematics, the drawing and the elementary physics teaching. Although the main object, as the president has said, should be to educate the eye and the hand, nevertheless this education should not be unassociated with the other studies of the curriculum. The object should be to connect the manual training with the work of the class-room, and this can be accomplished by close connection between the work of the shop and the drawing, mathematics, elementary physics, etc. The pupils are asked to make their own physical apparatus, and geometrical figures are of course constantly brought before them, and many opportunities are offered for making their space perceptions more definite and clear. Another advantage in such a school brings me to what Professor Patten has said as to the function of the teacher taking the place of the military officer. It is very difficult for the teacher in the ordinary school room to discharge that function, but the teacher in the shop can do it. The pupils must present themselves before him before they go to work. He inspects their clothing and sees that they are neat, that they are neat in their work, that they put away their tools and keep them properly; he gives that personal supervision to the habits of his little workmen which should be given, but which the other teacher can not give.

In all respects I can say that we have found after 12 years of observation that the regular work of the school has been strengthened by the introduction of manual training, and especially the English work and the compositions. The great difficulty lies in controlling the expression of the pupil's thoughts, of knowing what is in the pupil's mind. The teacher must know this in order to be able to control the pupil's thought. By introducing shop teaching and requiring the pupil to describe the operations which he has performed in the shop, and to describe the work in the factories he visits, the master of the shop is enabled to know approximately the content of the pupil's mind and to control his manner of expression.

VIII.—Methods of Instruction.

The best methods of teaching modern languages.—Ex-President E. H. Magill, of Swarthmore College: What then do I recommend to the students of the modern foreign languages in our colleges? First, that they should rid themselves, once for all, of the idea that a little smoothly flowing, trivial conversation, upon topics of daily interest, in another tongue, is the *sine qua non*, and that they should not spend, not to say waste, their valuable and overcrowded time in acquiring this fluent speech. The "natural method" (so called) of teaching the modern languages, in its unadulterated state, I consider to be one of the greatest popular fallacies of modern times. The very expression, "natural

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method," is in itself misleading and a misnomer. If it really were the natural method, it would surely commend itself to all educators. But it should be remembered that what may be natural for young children, in acquiring their own tongue, is by no means natural for more mature minds. Children acquire their language by simple imitation, often repeated, with little or no exercise of the reasoning powers. No such method is possible with older persons in acquiring a foreign tongue. I say that no such method is really possible, after the reasoning powers have made any degree of development; and I will add that, if it were so, there is not time in this short life for its successful application. How much of written and spoken language does a young child learn in two months? I need scarcely say that it learns nothing in this time except how to utter a few common words and phrases, and, of course, nothing whatever of written or printed speech. And yet, in two months a mature mind may acquire enough knowledge of a foreign tongue to enable him to begin to read it with pleasure, and in two more months to read with considerable rapidity, and begin to make the acquaintance of authors whom it is a privilege to know. The "natural method," I say then, for mature minds, is wholly unnatural and irrational.

Observe that I do not say that the ability to converse intelligently in a foreign tongue is a knowledge to be undervalued and despised; but I do say most emphatically that this knowledge can never be acquired except by daily association with those to whom the language is their mother tongue, without the expenditure of an amount of time entirely incommensurate with its real value. Those who are never to mingle with foreigners can have no practical use for the language as a medium of conversation, and for those who are to do this there is no more valuable preparation than that obtained from reading and hearing read by a competent linguist the language to be learned. That this reading may be extensive, even in the short courses which our colleges can afford, there must be a thorough ground work laid by becoming rapidly familiar with the forms and constructions of the language and the principal common idioms and a vocabulary should be acquired as fast as possible, after the forms become somewhat familiar, by reading the language even superficially at first; and reading not in the ordinary readers of mere fragments from various authors, but reading some complete selections from authors of unquestioned reputation.

Hence, I say, make the grammatical drill short, sharp, incisive; reduce the amount of grammar needed for reading to a minimum; and by all means never waste time in the bootless and wearisome task of turning good English into poor French in the early stages of the course. It is quite early enough for a student to begin writing original French when he becomes familiar, after a great amount of reading (partly superficial, for rapidity, and partly critical, for thoroughness of knowledge) with the manner in which other persons write it! But this is by no means to be understood as ruling out dictée exercises, which should be practiced almost daily from the beginning. It is excellent practice for a student to write out translations in English of the language studied, and then restore it to the language from which it was taken. Many points, which would escape notice entirely if merely translation into English were followed, would thus receive attention and be rapidly and firmly impressed upon the memory.

The one panacea in teaching Greek.—Thomas D. Seymour, professor of Greek at Yale: The most foolish thing in education is the suffering of words to be forgotten as soon as they are learned. For this evil but one cure can be found—review. If I am ever pronounced a monomaniac this is the subject which will be found uppermost in my mind. This is the one panacea which I offer for all ordinary ills and troubles in learning Greek: If the student learns with difficulty or forgets easily, if he has weak eyes or an aching head, if he has but little time for study or is behind his class, whether he wants to excel in Greek or wishes to take as little pains as possible with the language, let him review!

The principle of reviewing, of course, is this: If I am introduced to a man on the train and have a casual half-hour's conversation with him to-day I may be able to identify that man at once a year hence, or, having near-sighted eyes and thus a dull memory for faces, I may be compelled to say: "I remember your face very well, but I confess I can not say where I have met you before." But if I have a ten-minutes' talk with that man to-day, meet him on the street and exchange greetings with him next week, talk with him again for five minutes a month hence, see him and some of his relatives for a few moments in the spring, I could identify that man with certainty a year or ten years hence, although I had never spent in all more than half an hour with him. So with words. If a student meets a word to-day and is introduced to it, has a little

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chat with it, as we may say, but does not meet that word again for two months, he is obliged to say: "Your face is familiar, but I can not call you by name. I must apply to my nomenclator for information about you."

The plan of reviewing which students should be urged to adopt, and which they must be stimulated constantly to follow, is to review the day's lesson as soon as possible after the exercise in the classroom. Only thus can the corrections which have been inculcated be fixed firmly in the mind. Otherwise when the student takes up that work after an intermission of one, two, or three days he is apt to remember only that something has been said on this or that point. Often he is not quite sure whether a member of the class gave one rendering and the teacher strongly preferred the other, or whether the case was just reversed. But if he reviews the work soon after the lesson is read he can not fail to remember the circumstances and the exact point that was made. Now, if once a week the student takes time (perhaps half an hour) to review all the Greek he has read during the week no special effort is required; he remembers the meaning of the words and phrases and the whole situation. Again, if once a month the student takes the time (perhaps an hour or an hour and a half) to review all the Greek he has read during the preceding month, no great effort is required; the words and constructions are familiar. Then the general review at the close of the term becomes what it should be, a look from a superior position over the whole field which has been traversed. Most of the details of that work are fixed in the memory for life, and even if they should become dimmed they may be easily brightened.

The only objection that can be raised to such a system of reviews is that it takes time. And so it does at first; but the time which is invested in that way bears the heaviest interest from the very outset. The advantage gained from the thorough appreciation of the situation, through the familiarity with the earlier portions of the work will be felt at once. The same words and constructions are constantly recurring, as the student will remember in his vexation when he is obliged to look up a word for the fifth or tenth time.

How to learn to read Greek as a living language.—Prof. Thomas D. Seymour, of Yale University (in school and college): If the teacher has not time to have the Greek both read aloud and translated, he should omit part of the translation and have all read aloud. * * *

This practice in pronouncing Greek words until they are as familiar to the ear as they are to the eye, should begin with the very beginning of the study of Greek. If this is neglected then the loss can never be made good.

Probably many of you are familiar with what the well-known archæologist, our countryman by adoption, who died less than a year ago, Dr. Heinrich Schliemann, has written with regard to his experience in learning foreign languages, in which he had unusual success. When he, as an errand boy in Hamburg, saw that his promotion in business could be gained only by a knowledge of the Russian language, he could find no teacher, but set to work with an old Russian grammar and a copy of a Russian translation of *Télémaque*, which he found at an old book stall. He read this Russian *Telemachus* aloud, and in order to force himself to persist in this, he hired, for a few cents a night, an old man who knew not a word of Russian to hear him read this work aloud for three hours every evening! Schliemann afterwards learned about a dozen other languages in a similar way, and believed with all his heart that his success in this matter was due solely to his patience and persistence in reading aloud.

If from the first the Greek is made thoroughly familiar to ear and tongue, the easy, oft-recurring words like those for *house*, *boy*, *man*, *woman*, *horse*, etc., would demand no more effort of mind for their apprehension than many English words, like *mansion*, *steed*, etc., which the school boy does not himself ordinarily use. And if the most frequent words require no effort of the memory the more time and strength are reserved for the rarer and more difficult words.

But the reading of the Greek aloud not only aids materially in fixing the meanings of words in the memory; it also renders important service in assisting the mind to grasp a clause or a whole sentence as a complex, and to receive the thought of the whole as a unit, rather than in separate details, each of which has to be disentangled from the rest. Thus, and thus only, does the beginner learn to read Greek as a living language, and he will find true literary enjoyment as he gains increased facility in reading without conscious translation.

The home-study of pupils.—Margaret W. Sutherland, in the Ohio Educational Monthly: The giving of work to pupils simply to give them home-work seemed a strange thing to me. In 22 years of teaching, that phase of my duty had never

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presented itself. I had always determined what I thought a proper amount of work to require from my pupils and then allowed it to be done at any time they could do it. I believe very thoroughly in giving them work to do and then holding them responsible for the doing of it. * * * But I do not like the teacher to assume that she has the control of an hour, an hour and a half, or two hours, out of school time. Indeed, when one is among teachers, the question sometimes seems not to be "Have teachers any rights that parents are bound to respect?" but "Have parents any rights at all in their children?"

In the earlier years of school life, I can scarcely see the two sides to the question, "Shall a child study out of school hours?" It may be that my range of vision is narrow. I am ready to have it widened by any one who will give me more light. But these early years are so evidently a period for physical growth; nature so plainly points out the necessity for play; there is so much to be learned through childish investigation of the world lying about, that more than five hours of the day that ought to be much shorter than the grown person's day on account of the amount of sleep so necessary for proper growth, to be spent on school-work is eminently unwise. Psychologists and physiologists both warn us against the danger of overstimulation of the brain, which leads to "an increased activity of the organ due to an unfair distribution of the physical energy, the organ of the mind being enriched at the expense of the vital organs." I deprecate the requiring little children to do school-work at home, not only on account of the possibility of injury to the body, but because it does not seem to me best for the mind. There is danger of the mind's becoming jaded from continuing too long at the same kind of work. It loses its interest in a subject; and the strength of will is not sufficient to hold the attention firmly and habits are formed detrimental to concentration, that secret of success in all mental labor in later life.

There seem to me still other reasons why the teacher should not claim too much of the child's time out of school hours. I recognize the fact that our children come from a great variety of homes. Surely, many of them have work to do at home. This is particularly true of our girls in the cities and of both our boys and girls in the country. This work is often manual training of a valuable kind; and when there is not too much of it, it affords a healthful variety to the child.

There are parents—and I do not want to think their number pitiably small—(if it be, our schools must have done lamentable work in the past and are responsible for miserable failure) who can advise good reading for their children, and who wish them to have some time for acquiring that taste for good books that is rarely acquired if not in childhood or youth. Some one suggested that our schools were doing this work in literature as part of the regular school work. The amount done in this line in even our best schools is pitiably small. What cultivated parents would be at all satisfied with it? We shall do well if we teach the children in our schools how to read a good book and then direct them to some good books. It is a noble thing to inspire a love for good books in the child who has no one at home to be to him an inspiration. To guide and inspire is the design of the "Reading Circle for Children." Shall we interfere with its good work by sending home so much spelling to be studied or so many problems to be solved?

The girls in our higher grammar grades must receive our special thought when we are considering this question of home study. We are either criminally ignorant or cruelly thoughtless if we do not give our girls special care at the transitional period of their lives. They so especially need plenty of fresh air, sleep, and all attention of those interested in their well being to keeping them free from anxiety and nervous feeling. Let them pass this period in safety, and they develop into strong women, capable of a great amount of mental labor, and of wonderful endurance where love demands it. Of a bright and sunshiny disposition, they scatter blessings wherever they go. On the other hand, if they are given work that curtails the time that ought to be spent out of doors, work that prevents their being sound asleep before the grown members of the household, or worse than all, if they are worried about class standing or high per cents, they are apt to carry through life seeds of suffering that will render impossible prolonged mental effort without serious danger, seeds of suffering that will make them break down under any severe trial or make them peevish and fretful or selfish and despondent.

A grievous defect of our system.—President O. D. Smith, of the Alabama Educational Association: I am satisfied that too much stress is laid on results achieved by pupils and far too little on the effort and labor bestowed. One of the griev-

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ous defects of our sytems of marking, rewards, and distinctions, is that it takes no account of earnest, conscientious effort, of severe, persistent labor, unless they have been successful. The dull pupils, those hampered by an adverse environment, by want of preparation for work required, feel the injustice of such systems; to their other obstacles is added the discouragement of unappreciated effort. I insist that honest, hard work rank highest in all estimate of school work. Let the student feel that work is the valuable thing to him in its results in achieving a real education.

There is danger also that our improved methods, superior appliances, the processes of the new education will insensibly infuse into the minds of teacher and pupil the fatal notion that there is an easy road to education, over level plains, by the still waters, through rosy bowers; that the old, rugged road, up the hill Difficulty, with its briars and brambles, rocks and rough places, traveled with toil and sweat, has been abandoned.

The schoolmaster of the olden time had one qualification worthy of imitation, he believed in and exacted work.

Just so far as the improvement in processes, methods, and appliances have stimulated and facilitated work, so far as they have made a given amount of work effective, they are a positive good; so far as they supersede the necessity of work they are an evil. One must work out his education as well as work out his salvation.

Vicious modes of recitation.—President E. B. Andrews, of Brown University: A vicious mode of handling your class will do very much to develop inaccuracy, more perhaps than a perfect curriculum can overcome. A recitation which is merely that, only a text to the pupil, embodying no instruction, is sure to promote superficiality. There is a knack of reciting which many will acquire: a habit of mere glibness and parroting will follow, and the mind be turned away from real attainments. Here lies one of the teacher's chief temptations. We are forced to cherish rapid and fluent class exercises, because they save us time, which is so precious. We are thus beguiled into treating, if not considering, those as the best scholars whose tongues wag the fastest in the class. Next, our own ideas as to what a recitation should be become confused and faulty, the final result being that the appearance of attainments is substituted for attainments themselves, and that the pupil is actually aided by us to lose sight of his own real growth, only to be awakened, perhaps too late, when out in active life he is called to match himself with those trained upon a more thorough plan.

Every day's lesson an examination.—William A. Mowry, in Education: In primary and secondary schools almost every day's lesson is an examination, not merely of what has been prescribed to be learned for that special occasion, but indirectly and incidentally of all that has been taught before on the subject. It is, in truth, the mark of a good teacher to keep a perpetual informal review on foot, and to cause his classes to feel that any past acquisitions are always liable to come up in new connections.

College entrance examinations.—President D. C. Gilman, in the Cosmopolitan: I believe that the day is coming when there will be a revision of our educational creed, when the colleges will not make their entrance examinations such rigid tests of memory as they are now, but will contrive to make them tests of power. Is a boy capable of carrying forward the studies of the college? That must be found out. His capacity to retain and repeat what he has learned is one sign of his qualifications, but there are many others which a nicer analysis may employ. The qualitative test is quite as important as the quantitative. Not the size of the brain, but its structure determines its worth. The possession of 10,000 facts may distinguish an idiot, but an idiot gives no proper emphasis; he does not perceive the difference between the trifling and the fundamental.

IX.—Physical Training.

A just medium can be secured.—President D. C. Gilman, in the Cosmopolitan: One of the first requisites of a good preparatory school is bodily discipline. This is partly to be secured by watchfulness in respect to posture, diet, repose, gymnastic, within the school walls: it is to be still further promoted by abundant exercise in the open air. Manly sports with the bat and the oar, running, jumping, bowling, swimming, rowing, riding, fencing, boxing, and, if possible, sailing, are all to be encouraged. Nor is military training to be underrated. The systematic exercise of every limb and every muscle is desirable, not under rules too rigidly laid down by the higher authorities, but under regulations

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spontaneously developed by the youth. It is generally conceded that just now, in England and this country, there is danger of intemperance in sport. This may be less disastrous than intemperance in drink or meat; nevertheless there is such a thing as inebriety in athletic games. I do not refer to the danger of broken limbs and bruised faces, for they are rarely enduring injuries, but to the danger of unfair rivalries, of bad associations, of peculiar temptations in the anticipations and enjoyment of victory or in the depression of defeat, in the neglect of other and higher scholastic duties, in the waste of time and money upon costly journeys, perhaps in extravagant hospitality. The boys themselves must be encouraged to correct these tendencies, but they have a right to expect that we older boys will remind them of their highest obligations and encourage their fulfillment. With the reasonable control which players, teachers, parents can readily exercise, and which the young ladies and the newspapers might greatly encourage, the just medium can be secured, and athletics continue to be an essential factor in the training of American boys.

The place of games in education.—James L. Hughes, inspector of Toronto public schools (Canada): In physical development, as in all other departments of human culture, the law holds good that the informal is better than the formal, giving as it does not merely greater power, but greater spontaneity and freedom also; so the games of the yard and field will be recognized as forming one of the most important departments of physical, intellectual, and moral training. New games will be devised by the highest medical councils of the world, in consultation with the best minds in the teaching profession. Games may be improved without limiting the freedom and spontaneity of the playground. The games are really the best means provided in the schools of to-day for the exercise of the complete self-activity of the pupils; the only agencies for the full development of executive power; the only school process that completes the essential sequence of feeling, thought, decision, action, in application to the threefold nature of the child. The educators will not continue long to be mad enough to leave so potent an educational agency as games to chance.

Play, and plenty of it.—Principal George M. Grant, Queen's University (Ontario): Physical development does not demand gymnasium apparatus or a drill sergeant. As a rule children will see to this matter for themselves, in the best ways, if only opportunities are allowed. The games of children are, for the great mass, the very best means of securing good physical culture. Play, and plenty of it, is indispensable in education. Play means harmonious development of the body without fostering the self-consciousness that is apt to be induced by modern pretentious substitutes in the shape of military drill and gymnastic exercises.

There is no substitute.—Clara Conway, chairman of committee National Council of Education: Any plan or system of physical training which gives no attention to individual needs is defective. But here lies the chief danger, namely, that the lack of wisdom or skill in the use of apparatus may lead to serious results. There is no doubt that ill-chosen or ill-directed exercise in the gymnasium is a cause of deformity. The frequent and prolonged performance of unnatural movements is a fruitful source of enfeeblement and nervous disease. There is fortunately a strong reactionary movement against excessive work in the gymnasium, and the wisest are those who see that no movement they can prescribe can take the place of free voluntary out-of-door exercise, in which the activities have full play and in which the emotion of pleasure is a strong element. The law of will must be in force, hence there is doubt if physical exercise imposed upon pupils under protest of the will can be effective. On the other hand, in dealing with nervous or overtaxed students care should be taken to avoid exercise which requires sustained attention, and more still to avoid excessive exercises, the results of which are as serious as those of overwork.

The relation of mental to physical work.—Clara Conway, chairman of committee National Council of Education: The relation of mental and physical work is very close and vital, and yet in a careful study of the question how to give at the same time work to the inactive muscles of the child and repose to his over taxed brain there seems to be a kind of contradiction which makes the solution of the problem very difficult. The conditions of the work are the same for the brain which thinks and the muscle which contracts, and in both these organs greater activity of function is accompanied by greater production of heat. In the laborer and in the thinker alike there is an increased flow of blood toward the organ which works, and a greater vibration of heat within the active element.

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In difficult gymnastics there is a strong exercise of the will, judgment, and other psychical faculties, and if there is economy in the expenditure of muscular force it is at the expense of the nerves and the brain. Therefore, it is impossible that the nerve centers gain repose under the influence of movements which excite the whole nervous system. The overworked student requires economy of nervous energy, perfect repose of the brain, and rest of the psychical powers. A run in the green fields will free the mind and rest the head better than any system ever invented, because the head has no part in the lively exercise of running. All thoughtful teachers with gymnasia at command have noticed the indifference and apathy of intellectual students in the matter of difficult exercise. The reason is physiological and ought to be regarded. The tired brain makes strong and instinctive protest against an exercise requiring as much effort of the brain as of the body. In every case of this kind the discriminating teacher will prescribe exercise producing muscular and not nervous fatigue. Exercises which have been long practiced and have been mastered are performed automatically and require no brain activity, while at the same time they quicken the blood current, regulate the respiration, and give tone to the digestive functions. There are conditions of mental sluggishness for which one remedy is the performance of physical exercises requiring the concentration of will power and sustained attention; no system of education is complete which ignores the fact. But for the overworked child help comes best from long walks with mother over the hills, from the old popular games, and, indeed, from anything rather than difficult gymnastics.

The general principles of physical training.—Clara Conway (from the same report as the preceding): Our first duty as the guardians of the child is to see with all possible care that the growth of childhood be not disturbed or distorted by any influences adverse to nature. But how? By such a nice adjustment of mental and physcal work that one be not made to suffer at the expense of the other; by systematic daily exercise in order to acquire the aptitude. To this end we place walking first; well-selected games, second; gymnastics, third. Walking, as a physical exercise merely, is a perfect exercise, because it taxes the whole system; every muscle, every nerve and fiber is brought into play. And when to this is added the interest awakened by the love of nature, a study of birds, a hunt for flowers, a search for insects, the temper is sweetened, the imagination brightened, the mind broadened, the spirit lifted near to God. It is something, says John Burroughs, to press the pulse of our old mother by mountain lakes and streams and knows what health and vigor are in her veins.

Games rank next. There seems to be a close relation between pleasure and high vitality or the vigor of the system, and between pain and the feebleness of the system. Hence the law of self-conservation. But the games should be carefully selected. Girls and boys left to themselves in this matter make their choice without considering the importance of quality and quantity. Gymnastics have a value, too, which we must not underestimate in the general summing up; but in this day and generation, when the world is alive to the supreme importance of a healthy body and physical culture is the latest fashionable "fad," not many words are needed here. The first derived from the practice of gymnastics, says an eminent physiologist, is the education of movements. The country boy, rough, clumsy, and uncultured, rapidly gains ease, grace, and polish. His muscles, hitherto used to slow obedience, learn to obey with rapidity and precision, and thus undergo a discipline to which they had been strangers. The gymnastic work, carefully done, gives strength, and strength gives confidence. There is a way of standing, walking, and sitting, not only easy and graceful, but requiring least expenditure of force. "Strength at the center and freedom at the surface" should be a precept of the gymnasium. "Let soul demand and body respond" should be another. Much of the work of the gymnasium is reformatory or hospital work. There is a patient uprooting of physical faults growing out of inheritance and out of environment and habits of life, and in their stead are established fine, graceful carriage, ease of manner, new and correct habits. In the hands of skill and wisdom the gymnasium is a powerful means for the freeing of the body, until it becomes not only the fit temple of God, but the expression of his best thought.

Should boys and girls engage in the same exercises? Dr. Sargent answers the question in these words: Up to 10 years of age any exercise that will be beneficial to a boy will be just as valuable to a girl. Between 10 and 14 girls should take lighter exercise, with more frequent intervals of rest. After that age it is simply a question of time, amount, and degree, rather than of quality. As a general rule, he says, girls need more muscle, making exercise than they

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get, not so much for the sake of acquiring greater strength as for the influence that well-developed muscles have upon the brain, nerve centers, and other parts of the system. For this reason many of the so-called calisthenic movements do not meet the demands of the female organism. They weary and exhaust without giving anything adequate in return. These matters can safely be left to the judgment of a well-trained teacher. The corset should be taken off and kept off, or, what is better, never put on, in order that the body may be built up with the new material that will come to it as the result of the exercise, and to eliminate the old, broken-down tissue from the system.

Should the schools be furnished with the apparatus of the gymnasium?

We answer that no gift in the power of the State is too rare or precious for the child in its keeping, and no expense too great for the process of preparation for American citizenship. If the eminent specialists, who are doing so much for the causes of physical education, will demonstrate beyond question their ability and power—and we think they can—to remedy the evils of imperfect physical organizations, then the State owes it to the child, through the school, not only to provide the necessary means, but to furnish also the teacher, wise by natural fitness, and skilled by the best training of the schools.

What system?

The answer is brief. Any system that is good, or a combination of the best in every system.

Should not become a will training.—W. T. Harris: I think that physical exercise ought not to be set as a task when it is intended to serve as recreation. It seems to me that it has been one of the great defects in physical education that it has been brought into the schools and made a will training, so that the child who has been exhausting his nervous energy all the morning at his lessons in school is then called upon to exhaust it even more rapidly in set forms of exercise instead of relaxing, as he ought to. The child must stand up: he must not lean. He must pay strict attention and imitate precisely the motions prescribed. This is a strain on the will power, and calisthenics, as practiced in many cases, exhaust nervous energy faster than a class exercise in Latin or Greek. * * * Now I am a great stickler for the old-fashioned recess, the wild recess, the pupil bursting out of the schoolroom, running about, shouting, and pushing his fellows. It is this recess that recreates the pupil and restores his nervous energy. After the enjoyment of a little freedom and a run the child returns to the schoolroom and does his work better; but these set exercises which strain the attention of the child are hurtful. * * * There is great danger in this matter of physical exercise of overstraining in certain directions and producing permanent weakness. When one looks at the danger of half knowledge in this matter, one is almost frightened.

A vast problem.—G. Stanley Hall: If the object of the [physical] exercise is to increase the strength and physical development, it should always be when the body is rested and fresh. But if the object is divergence, in order to further intellectual work, it is a totally different thing. Then it should come when they are fatigued. Physical exercise is not one thing, but it is a great many things. I do not think we realize what a vast problem it is.

In case of fatigued pupils.—Clara Conway: I have frequently, in the schoolroom, seen pupils object to the physical exercise when the hour came, and upon investigation I find that the pupil is tired. In such a case I think it common sense that the pupil be allowed to rest, or sent out in the air and sunshine, where she may have the best rest. I think it would be cruel, I think it would be an outrage, to compel a girl to take physical exercise under those circumstances. On the other hand, I am not prepared to state that physical exercise should be dispensed with. I believe in physical exercise, but if it is observed that physical exercise is harmful it should be abandoned.

There are times when physical exercise should be given to tired pupils who are mentally fatigued, and in that case it should be such exercise that the attention of the student is not required, and where no concentration of the mental faculties is necessary, but in which the exercise is merely automatic.

Preservation of health a sine qua non.—G. Stanley Hall: Some of us have progressed to the point where we feel that no system of education is beneficial if the young person leaves the schoolroom in worse health than he entered it.

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X.—Private and Parochial Schools.

Questions to be approached slowly.—Superintendent E. E. White, Cincinnati: The imperative need is that the people be educated, no matter where. If the private schools are imperfect they will be improved through the very necessities of the case; the parents will not continue long to send their children to inferior schools. I think this compulsory education should be an English education; that American children should be taught the language of the country; and I do not see any difficulty in securing this in all public schools. We have had such a law thirty years in Ohio. I am told that there are localities in some of the Western States where the instruction in the public school is not in English. No one can object to stopping that; but the difficulty is in demanding that instruction in private schools shall be in English. This may be right, but it brings an element into the question that gives trouble. In many private schools the teachers themselves can not speak English, and for that reason English in private schools and the State supervision of private schools are questions that I would like to see approached slowly. The people in most of the States are not yet familiar with the compulsory system.

State authority over private schools.—Governor H. W. Ladd, of Rhode Island: In a State so small and compact as ours it should be the aim to so systematize and correlate all our activities in this line as to be able, each year, to give an accurate and intelligent review of the whole field, and to show exactly what has been expended, what has been accomplished, and what are the various channels through which the work has been carried on, with such details of the plans and methods employed as may be necessary to an intelligent understanding of the whole situation. To this end the powers of the State Board should be enlarged to give them a definite connection with each and every educational institution carried on by the State; and they should also be clothed with authority to secure from each and every private school in the State such an annual return as shall show how many children are taught therein, and also what grade of instruction is given. These changes will at once place the board in a position to exercise its supervisory and directory powers with an effectiveness impossible in the present condition of affairs. Then, conclusions and recommendations will be based upon complete and accurate information from every section of the State and from all grades and forms of instruction.

How far the State may take cognizance of private schools.—Superintendent A. P. Marble, of Worcester, Mass.: A compulsory school law, then, implies that the State (which is only an organized form of public opinion) may take cognizance of private schools far enough to see that no child is deprived of that small amount of education on which the State insists; that is, ability to read and write in the English language, and a moderate knowledge of arithmetic and geography, for example.

But so much of oversight is not hostility to private schools, nor any infringement of parental control any more than the law requiring parents to clothe and feed their children. On the contrary, such an oversight is a positive help to a private school: since parents would not patronize it if the children could not receive certificates to entitle them to be employed, or if their children did not receive a fair amount of education, such as the law requires.

The public-school authorities, if wise, would not undertake to inspect private schools in any other than a friendly spirit and for the purpose of learning what is indispensable for them to know. They would be received cheerfully, since all schools are presumed to aim at good education; and they would soon be welcome in making friendly criticism. And parents would not long patronize a school which refused to allow the public-school authorities to ascertain what is so important for them to know, where the principle is acted on that all children have a right to a moderate amount of education. On any other principle than that outlined above, a compulsory school law—it would be better to call it a law for securing to each child his birthright of intelligence, since compulsion is a harsh term to American ears—on any other principle, such a law would be a dead letter; for if the school authorities can not inquire into the character of any school, then by means of a fictitious school the law might be successfully and easily evaded. Examination of each pupil applying for a certificate is only an indirect and practically very cumbersome way of inspecting the school which he has attended. This is not a merely theoretical question. In my city a private or parochial school for French children has invited with great cordiality an inspection for the purpose indicated above; and in a few instances certificates have been refused to children who had not acquired a knowledge of the English language.

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What the private school should be measured by.—F. W. Parker, Cook County Normal School: The work of all private schools of any kind, whether sectarian or secular, should be measured entirely by their direct influence for good upon the common school, into which they will one day all be merged as soon as democratic growth demands that step.

Status of separate schools in Ontario.—Hon. George W. Ross, minister of education: The public schools of Ontario are undenominational. Fifty years ago the Roman Catholics were granted separate schools, and by a more recent act, in settlements where a Roman Catholic population predominated and a Roman Catholic was employed as a teacher in the public schools, Protestants were allowed to form themselves into Protestant separate schools. These classes of schools number as follows: Public schools, 5,380; Catholic separate schools, 243; and Protestant separate schools, 11. The department has not the same authority under the statute over Roman Catholic separate schools as it has over the public schools. Yet in the main features, such as the qualification of teachers, excluding those in religious orders, the selection of text-books, except those required for religious exercises, the authority of the department may be said to be the same.

Transfer of parochial schools to school boards in Minnesota.—Circular of State Superintendent D. L. Kiehle (October 20, 1891): The transfer of parochial schools to the control of a board of education has deservedly attracted much attention. It is important as an experiment in uniting all American children in the system of state schools; satisfactory to a large class of our fellow-citizens who have hitherto expressed great distrust of the influence of the public schools upon the religious character of their children; and also important in the possible danger of putting the public school administration in compromising relations with a religious body. Therefore such an experiment requires on all sides a spirit of intelligent confidence and entire frankness. It is in this interest and in answer to many questions that I call attention to such matters as may be helpful in studying and directing this experiment.

1. The State has made ample provision for the education of her youth. It is her policy to make them satisfactory to her best citizens and helpful to them in their highest ambition in training their children for the duties of life. She therefore requires all the people to share the expense and desires above all else that all the youth of the State enjoy the advantages afforded.

2. The attitude of the State is one of entire organic separation from religion as represented in denominations; and she therefore requires that the distinctive work of the churches be entirely excluded from the public schools. The language of the constitution is very explicit, and is as follows: "But in no case shall the moneys derived as aforesaid, or any portion thereof, or any public moneys or property be appropriated or used for the support of schools wherein the distinctive doctrines, creeds, or tenets of any particular Christian or other religious sect are promulgated or taught." (Article VIII, sec. 3.)

To take this as showing indifference, or still more, opposition of the state to matters and institutions religious, is farthest from the truth, for in every way possible the state expresses the greatest interest in those religious bodies whose purpose, with that of the family, is to elevate and purify the character of the people. While the state must forego the exercise of authority in matters religious, in order to protect the rights of all religious bodies, she speaks in no uncertain sound requiring that the principles of the purest type of morality be carefully inculcated in the minds and habits of youth. It is her purpose in the administration of her public schools to express the spirit of the ordinance of 1787 for the government of the territory of the Northwest: "Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged."

So decided is this attitude of the state as the superior importance of character building that she allows to those of her teachers who fully appreciate their high calling all possible liberty in their choice of methods.

With this preface I proceed to define the limitations within which the public schools must be conducted.

LIMITATIONS BY STATUTE.

A board of education may not lawfully bind themselves to require or apply any religious test in the selection of teachers; neither may they distribute or classify pupils in departments, grades or classes, according to their religious

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faith. To do so could have no other explanation than the purpose to propagate the tenets of a distinctive Christian sect. And what may not be done directly may not be done by indirection; that is, the board may not occupy the apartments of a parochial school and have control of it with an implied or unexpressed understanding that the teachers shall be selected from those of a particular religious body, or that the children of a particular sect shall be sent there. Such an understanding must be regarded as sacredly binding by all honorable persons, and in the eye of the law and its enforcement at the bar of public sentiment would be condemned as a violation of the law, and would therefore work a forfeiture of all rights to any share in the public funds. The board of education must be absolutely free in the exercise of its authority for the organization and conduct of a good public school; and if the results are not satisfactory, the board must not be able to say that they were limited by implied conditions which the public understood and approved.

QUESTIONS OF EXPEDIENCY.

Beyond limitations and duties determined by statute, there are many other questions which must be determined by the judgment of the board consistently with the purposes for which the school is maintained. Some of these have religious elements and others have not. For example:

1. The Bible is a religious book, and as such it has no place in the public schools to promulgate religious doctrines; but, having merit of great historical, moral, and literary value, it may be used for these qualities. If, however, to any class of persons this is obnoxious, the board should require the discontinuance of its use.

2. Sisters of Charity are religious persons, and as such have no place in the public school to propagate religious doctrine; but if they be women of education and teaching ability, it lies wholly within the authority of the board of education to employ them to do the legitimate work of the school. If, however, to any class of patrons their presence is obnoxious or unacceptable by reason of the significance of their religious garb, the board must either retire them or require them to wear the usual garb of teachers in the schoolroom.

3. The same principle requires that in case the color, or nationality, or personal peculiarities of a teacher, otherwise well qualified, make him so unacceptable to patrons as to interfere with the purposes of the school, his employment must be discontinued.

4. While public funds and public property may not be used to propagate religious doctrine, the interest which the state has in all voluntary organization of a benevolent and philanthropic nature, has always disposed to allow such bodies any use of its buildings that would in no wise interfere with their public use. In country districts it has been customary from time immemorial to allow the use of schoolhouses for religious worship and Sabbath schools as well as other meetings. This practice is one of expediency and propriety, to be decided by the judgment of the board.

THE FARIBAULT SCHOOLS.

In view of the public importance of the action at Faribault, I have visited the schools there, and by the courtesy of the board of education and the city superintendent, have become acquainted with the plan and purpose of the board in accepting the pupils of the parochial schools under their supervision. I feel warranted in expressing to the public my entire confidence that the board have acted intelligently and in no way comprise their authority as public officers; that they have used their independent and best judgment in the choice of teachers, in grading and promoting pupils, and that they are determined to give the children in these grades advantages equal to others of the city.

This experiment, for such it is, is being conducted in such a spirit of consideration that if at the end of the year the Catholics conclude to resume the education of their own children it will be done without disturbing the friendly relations of mutual respect that now prevail.—*St. Paul, October 20, 1891.*

XI.—PUBLIC SCHOOLS.

Relation of the State to public education.—From the message of Governor R. P. Flower to the New York legislature, January 5, 1892: Reports received by the Superintendent of Public Instruction indicate that the number of children in the State of school age (*i. e.*, between 5 and 21 years) in 1891 was 1,821,773.

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The number of children attending the common schools in the same year was 1,054,044. More than 767,000 children of school age therefore were either not in school at all or received instruction elsewhere than at the public schools. The proportion of public school children in 1891 consequently was about 57 per cent of the total number between the ages of 5 and 21. The total cost of supplying this education to somewhat more than half the children of school age in the State was $20,269,118.29. The greater part of this amount was raised by State and local taxation.

Considered with other statistics these figures suggest some serious reflections. In 1851, forty years ago, 75 per cent of the entire school population attended the public schools. During these forty years the State has done much to improve and strengthen its common schools, to increase their efficiency and to compel attendance, yet during all that time there has been a steady decrease of attendance in proportion to the school population, and nearly 20 per cent fewer children, proportionately, attend the public schools now than attended them forty years ago. In the same interval the expense has increased from $1,884,826 to $20,269,118. For each pupil who attended the public schools any part of the year in 1851 the average cost was $2.26; in 1891 it was $19.22—the increase being 750 per cent.

If these figures are accurate, and they are based upon official statements and reports, they are startingly suggestive. If true, they mean retrograding influences and greatly increasing extravagance in management. Much of the increased cost per capita is undoubtedly explained by the erection of new school buildings, possessing greater facilities, better accommodations, and more attractive surroundings. But the surprising thing is that this sort of expenditure has not increased the proportion of children who avail themselves of these privileges, but has been accompanied by an actual diminution. Should the same ratio of decrease in numbers and the same ratio of increase in expense be maintained, the State in a few years will be actually taxing its citizens many millions of dollars each year—more than is needed now for all other purposes of government—to supply an education to a minority of its children.

This is neither democratic nor right. The State must, for its own protection and interests, see that the opportunities for a common-school education are offered to its children, but it will not be justified in raising large sums of money by taxation for this purpose without accomplishing a corresponding amount of good. If there is waste in the present lavish expenditure it should be discovered and checked. If the present compulsory education law is not effective, and the evidence is clear that it is not, it should be strengthened by wise amendment. Certainly the State can not afford to permit thousands of its children to grow up in ignorance, only to increase that population which crowds our jails, our reformatories, and our poor-houses, and menace the integrity of our public service and our institutions with the weapon of an unintelligent ballot.

No one believes more thoroughly in our common-school system than do I. It is the great hopper into which the untrained juvenile minds of Irish, English, Italian, German, Swedish, Bohemian, or American parentage, with their hereditary ideas and tendencies, are tumbled together and shaken up to form the substantial qualification of the American citizen. It is to the American ideas implanted in our youth in the common schools that our country owes her prosperity in the past and must look for the preservation of her institutions in the future. Every schoolhouse may be made a stronghold of defense against the spread of Socialistic and un-American ideas. No more worthy task therefore can be undertaken by the legislature than to strengthen and bulwark our common schools and make them centers of widening rather than diminishing influence. It will first be necessary, however, to ascertain the causes of the present unwelcome tendencies which statistical comparisons demonstrate. It may be found that much of the proportionate falling off in general attendance (aside from that which is explained by the increase of private schools), and certainly the increase in expenditure, arise from the modern tendency to so enlarge the curriculum of the public schools that they attempt too much and involve the State beyond its proper measure of responsibility. Certainly advocates of higher education at State expense can expect little sympathy from lawmakers, when the State, even with liberal appropriations, seems unable to compel merely rudimentary instruction, and thousands of children are growing up without any education whatsoever. Within the past two years the movement known as "University Extension" has assumed considerable importance and great popularity in this country. Its nature I understand to be the bringing of means of culture and higher education within the reach of persons who are unable to get a collegiate or university education, or, as it is more authoritatively described by one of its

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prominent supporters, "The purpose of the university extension movement is to provide a means of higher education for persons of all classes and of both sexes engaged in the regular occupations of life." Its methods are by lectures, class exercises and examinations, conducted in various "centers" under the supervision of a central head.

The movement has caused great enthusiasm in England and in this country, and seems to have accomplished much good in stimulating intellectual tastes among the people. It has received the cordial support of most leading educators and the generous encouragement of press and pulpit. While those who expect it, when fully developed, to fill the place of actual training in colleges and universities are quite likely to be disappointed, there is every reason for believing that it will raise the intellectual standard of the people and diffuse more broadly the benefits of higher education. With such purposes and aims every good citizen must be in cordial sympathy.

Heretofore, however, university extension efforts have been carried on under the supervision of some established university, or of some association or society organized for the purpose. For instance, in England there have been four great movements—one under the direction of Oxford University, one under that of Cambridge University, one under that of the Victoria University, and the fourth under that of the London Society for the Extension of University Teaching. In the United States successful movements have been associated with the University of Pennsylvania, later with the American Society for Extension of University Teaching, with Brown University, with the New York and Brooklyn Society for School and University Extension, and with other educational bodies or associations.

For the first time in the history of the movement, however, direct government aid and encouragement have been given, in the statute which was enacted by the last legislature of this State, authorizing the regents of the university to act as the central head for the promotion of this work and appropriating $10,000 for their expenses.

Inasmuch as this work is quite likely to be still further brought to your attention and another appropriation asked for, I do not hesitate to express my opinion that the assumption of this duty by the State was not only unwise in principle, but that if the movement is as successful here as it has been elsewhere it will involve the State in unreasonable obligations and be a constantly increasing object of public expense.

I am aware that it has been the policy of the State to encourage higher education, and that public moneys have been appropriated for that purpose, but I respectfully submit that before the State should enlarge its field of usefulness in that direction, whatever views we may have as to the propriety of that enlargement, it should first perfect its system of common-school education. The already excessive taxation of the people for this latter purpose and the lamentably inadequate results I have pointed out above.

Reform is necessary before extension.

My fears that the State will eventually find the control and supervision of university extension an enormously expensive undertaking, wrong in principle because it taxes the majority for the benefit of the few, and indefensible as State policy except under the broadest view of public welfare, are based chiefly upon the testimony of those who have been most closely identified with the new movement and upon the tendency of the movement where it has been longest tried. Thus far our State has committed itself merely to the obligation of meeting the expense incurred by the regents under their granted authority "to coöperate with localities, organizations, and associations in this State, where such education shall be desired, and to aid therein by recommending methods therefor, designating suitable persons as instructors, conducting examinations, granting certificates thereupon, and otherwise rendering assistance in such educational work." The statute, moreover, expressly provides that no part of the appropriation shall be used in paying for the services or expenses of persons designated or appointed as lecturers or instructors, it being the intent of the act that such expenses shall be borne by the localities benefited.

Yet if the State were to stop there the annual expense must be largely in excess of the present appropriation if the movement is to be successful, the tendency of every State commission or bureau being towards an increased expenditure. But will the State stop there? Experience and testimony in England do not give much encouragement of an affirmative answer to this question. Prof. R. G. Moulton, who is a Cambridge University extension lecturer, and who has been explaining the movement to audiences in this country, says in a published address:

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"We in England have tried, have ransacked every form of contrivance in order to make the movement pay itself—I mean pay itself out of the fees and tickets of the students who attend the lectures—and we have failed." So general has been this failure in England that dependence has been largely had upon private benevolence and endowment, and now the promoters of the movement are turning to the Government for financial assistance. In 1889 a national committee was appointed "for obtaining a grant in aid of university extension." In 1890 the local taxation act gave permission to English county councils to apply a certain part of the proceeds of a tax on spirits to technical education under university extension courses, and one county alone has this year appropriated £1,500 for this purpose. Even this indirect government assistance has not satisfied the friends of the movement, however, and in June last, at a meeting attended by many prominent educators and others, it was resolved to petition for a government grant to properly organized local bodies for the conduct of university extension teaching. This direct grant is desired not merely to pay supervisory expenses, but to meet part of the cost of teaching. There seems every possibility that the government in England will soon be bearing the greater part of the expense of this movement.

Is the prospect any better for abstention from seeking a larger share of government aid in this State, especially when the entering wedge has already been inserted?

Clearly it is not the intention of the promoters of university extension in this country to make it "pay itself." The American Society for the Extension of University Teaching says: "No great work in education along higher lines has ever been self-sustaining, in the ordinary sense of that term, and the society will be obliged to rely on the public spirit of all citizens, rich and poor, for funds to carry on the work." A writer in the Popular Science Monthly for November last, after discussing the cost of the movement, says: "The possibility of enlisting Goverment aid opens a larger question. University extension is a national movement which is intended to reach all classes and to promote the most vital interests of the nation. It has, then, as large a claim upon the national pocketbook as any interest which the Government can recognize." Even the regents of the university, in their extension bulletin, invite contributions to the movement, saying: "While the feeling seems to have generally prevailed that the funds of the State, raised by taxation, should not be used for the expenses of local work, however beneficent, and in that spirit the legislative appropriation in behalf of university extension was limited to general supervisory uses, still the cause of public education could be greatly advanced if it were possible to supplement and aid the work with judicious appropriations of money in the poorer and sparsely populated localities."

With such conditions prevailing further recourse to State assistance would not be unnatural, and I submit the question to your practical judgment whether it is wise for the State to continue to bear this questionable and in the future perhaps awkward responsibility.

The limit of public free education.—W. T. Harris: In America we explain our public-school system by saying that a nation of voters must be an educated nation. Where ignorance prevails, either an absolute monarchy is necessary to restrain the people, or else in case of a democratic form of government the demagogue will have the political control. We say that in a democracy each person is interested in the enlightenment of all his fellow-citizens. In a monarchy all the people are interested in the education of the monarch; their welfare depends on his goodness and wisdom. In a republic, where each is governed by all, it is the interest of each that all shall be wise and good.

Without education in literature, in science, and in history, the individual will be prone to superstition and intolerance. The selfishness of sectionalism and the selfishness of individuals will triumph over patriotism and personal integrity. It is a necessity for us to see to it that our rulers, the voters, are enlightened by schools and other civilizing influences.

This idea determines also the limit of public free education. Where the people are to obey laws made for them by an hereditary ruling class it may be necessary that the people shall be taught in the schools so much as will enable them to read and understand those laws. But where the people are to make the laws as well as obey them, what limit can there be to the school education required except the full preparation of the individual citizen to carry on his education for himself?

No person completes his education at school. For the nature of spiritual life is to be a perpetual education unfolding eternally. Man's ideal is the divine-

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human Exemplar-all-knowing, all-powerful to do, and all-benevolent. The most the school can do, therefore, is to teach the individual how to carry on his education by the aid of the printed page and the proper use of his social opportunities.

Extent to which the authority of the State should be exercised.—State Superintendent A. S. Draper, of New York: The legislative power in our several States has been content to exercise very little general or decisive control over the schools. Provision has been made for schools, but little or nothing has been done by the lawmaking power to determine the character or direct the work of the schools. If you will examine the statute books of all the States of the Union with this matter in mind, you will stand amazed at the almost entire lack of enactments, directing what shall be taught in the schools, or insuring instruction by persons of sound character and established competency, and you will wonder, as I have, that voluntary associated effort, unauthorized and practically unsustained by law, should have been able to accomplish what it has in the way of systematic organization and intelligent advancement. * * *

Now, suppose we take our system of public instruction as we find it, and inquire what needs to be done to qualify it for the thorough and complete work which the developing circumstances of the country seem to require. I apprehend we shall not differ widely in our conclusions.

BUILDINGS AND APPLIANCES.

In the first place, the whole subject of school buildings and grounds, furnishings and appliances, needs attention. The people fail to appreciate the moral and educational influence which a good house has upon the school. A comfortable, wholesome, attractive building is certainly a condition precedent to the best school work. Yet our educational plan, the country over, leaves this matter wholly to the intelligence, the wealth, the generosity, the business thrift, or the poverty, the ignorance, the parsimony, the whims and caprices of local settlements. Does experience show that it may be safely left there? In some cases, yes. In more, no. In our largest and weathiest cities there is frequently lack of suitable school accommodations. Even at the popular centers buildings are found to to be out of date, badly worn and defaced, imperfectly warmed and ventilated, poorly lighted, deficient in furnishing, wanting in appliances to do with. And how is it in the country? How many towns and districts have schoolhouses and outbuildings unfit for any use, houses which are a constant menace to health and morals, because of indifference, or because to build new ones will increase the tax rate? How many lack proper seats and desks and blackboards, and globes and maps, and all the things which contribute to the efficiency of a school? Of course, this is not so in all places, but that it is so in some places is enough and too much. A chain is no stronger than its weakest link. Will any of us admit that anywhere in America a public schoolhouse should by any less comfortable and complete than the average American home? But there is another consideration. This matter does not rest upon sentiment alone. There is responsibility somewhere. When the public takes the children of the people into its keeping during six hours of each day for forty weeks of the year, it is bound to give them the best possible care. It is bound to make the environment such as will promote the normal and healthful development of their bodies, while it cultivates their minds and hearts. Again, when the public maintains any building, it is bound to make it a model—one which will attract attention and cultivate æsthetic tastes, one which will stimulate a desire for improvement and lead out in the way of progress.

Who of us does not know that the schoolhouses of the land do not in general come up to these standards? So long as they are wholly left to ward aldermen, village boards, or district school meetings, they never will. What reason exists, in law or in fact why the buildings of a public and common school system should not be subject to public and general inspection and supervision? Why should not competent general authority inspect all the schoolhouses of the commonwealth, and require that in size, manner of construction, condition and equipment, all shall conform to such regulations as modern experience and scientific knowledge have shown to be necessary to the fullest accomplishment of the purposes of the State in providing by law for a public school system? * * *

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THE TEACHING SERVICE.

If the American school system is to successfully cope with the circumstances which confront it, and the still more trying circumstances which will confront it, it must be equipped with a more substantial teaching service. Perhaps one teacher in five or one in four is a professional. The force is too largely constituted of young girls or persons who are unable to prosecute any other employment successfully. Changes are frequent and constant. Two-thirds of the number who are now teaching will have ceased to teach in five years. Four-fifths of the newcomers are immature, physically and mentally, and are inadequately prepared for such a trust.

You may tell me that the law regulates this thing; that it determines who may teach in the schools. It assumes to, but it does not. A law is good for nothing that does not operate effectually. What does the law do? Ordinarily it confers upon city boards of education and county or district commissioners power to certify teachers. The members of the city board are not professional school men. How are they to intelligently determine who are qualified to teach school? But that is not all, nor is it the worst of it, for if it was they could employ a competent person to determine for them. They have the authority to employ teachers. They have aunts and cousins and daughters and nieces who want employment. And they also have personal and political friends with retinues of relatives, friends and acquaintances. They are human. They like to please. Only the strongest of them dare confront the misunderstandings and enmities in which a refusal to aid their friends will involve them. The greater number will use their opportunities to help those about them, even at the expense of the school system. And how much of a breakwater is the county commissioner against immaturity and incompetency in the schools? He is nominated at a political convention and chosen at the general election. He is under political obligations. If he does not pay them on demand, he is considered mean. The more honest and efficient he is, the more people there will be to engage in the enterprise of taking off his official head. He, too, is human, and he will ordinarily and almost necessarily be influenced by these considerations.

But that is not all in his case. What reason is there to suppose that the county commissioner is competent to examine and determine who may properly teach in the schools? He may be, but there is nothing to assure it. Everybody is eligible to the office. The qualifications which secure it are the ability to compass a nomination and gather in enough votes at the polls. These are not the qualifications requisite to the efficient administration of the commissioner's office. It would be as sensible to elect a man at a general election to manage a railway or construct a cantilever bridge.

There are no effectual statutory limitations upon the action of this commissioner. Possibly he may be required to certify teachers only upon examination. But what sort of an examination? Except through the constant and strenuous exercise of the legal authority of the state superintendent, it may be only a form; it may be conducted in the roadway. The world has no statutory guaranty of its substantial character and good faith. If experience in this connection has proved anything, it is that before an examination can be credited with any value it must be held at a stated time, in a public place, upon papers which are preserved, and by competent authority.

Indiscriminate licensing must cease. The age at which a person may begin teaching must be advanced. Professional training must be insisted upon whenever practicable, and where not, then at least a minimum standard of intellectual qualifications must be attained at a stated public examination. Examinations must be in competent professional hands. The authority to certify and the power to employ must never be lodged in the same persons. The certificate must be gained before employment is legal. Teachers must be treated better and their rights must be more thoroughly protected. They must be paid as well as equally qualified persons in other employments. Their tenure of position must be more secure. More men must be kept in the work. In short, a policy must be pursued, a plan must be devised, which will cause the teaching service to become broader, more substantial, more self-respecting, and equal to all the demands which may be made upon it no matter how exacting those demands may be.

THE WORK OF THE SCHOOLS SHOULD BE DEFINED.

Again, it seems to me, it is important that there should be an authoritative determination of what the common schools should do. The statutes are nearly silent in this connection. This matter is also left almost entirely to local author-

ties. We are living in times of marked activity, if not of feverish unrest. Experimentation seems to be the order of the day, and everybody has something new to propose. The schools do not escape these influences. Indeed, they reflect any popular disposition or caprice more quickly than any other of our public institutions. The result is indefiniteness and confusion in the public mind. This must be corrected or the end will be uncertainty and distrust.

The authority to levy and collect taxes is a high governmental power. It can not be exercised capriciously. The purpose for which it is exercised must be clearly understood and the object to be attained must be of such transcendent importance to all the people as to unmistakably justify the proceeding. One may properly gratify his fancy, he may speculate and experiment to his heart's delight, with his own money. But he has no right to do so with the money of the people. That must be put only to uses which benefit all, and then it must be used in sufficient quantity, and in such a way as to accomplish the object in view. These trite propositions relate to public educational work as to any other public undertaking.

I apprehend there are certain things which the schools must do to justify their existence, that there are other things which they need not do and yet may do with propriety, and that there are still other things which they ought not be permitted to undertake. * * *

The schools must be within reach of every home, and they must provide at least the fundamentals of an education to every child. They must put every child in possession of enough learning to enable him to act intelligently and understandingly in his social relations and as an American citizen. They must train his mind to act for itself, and they must, at least, go far enough with the work to enable that mind to stand alone and begin to walk on its own account. * * *

I entertain no doubt of the right and propriety of the support of high schools at common cost at the option of the qualified electors of each municipality. But there are evils resulting from the introduction of public secondary schools which need attention and which it will take time to correct. They attract public attention. They gratify local pride. They absorb the best teachers. Service in them is more remunerative and deemed to be more honorable than in the elementary schools. Their buildings are more magnificent, their equipment is more complete. Their curriculum rivals that of the best colleges thirty years ago, and what they do not feel justified in undertaking is not mentioned in even the Sunday newspapers. In the minds of educators, in the public esteem, they too frequently overshadow and dwarf the necessary and essential schools of the realm. The educational pyramid had better stand upon its base and not undertake to poise upon its apex. The best building and equipment, the best teacher, the best methods, should be provided for the beginners. The most generous support and the most alert attention should be given to starting the multitude rather than to decking out and polishing off the individual. The relationship should be more evenly and nicely adjusted by law, and the great mass of pupils who never get beyond the grammar grades should have most serious consideration of the law makers and of all interested in the well-being of the masses.

There are some things which have no legitimate place in our educational work yet which wedge their way into it. The educational theorist outruns all other theorists. The educational philosopher reaches after the unattainable and dives into the unfathomable even more than other philosophers. Speculation is without limits. There is no breakwater. He will suffer no layman to dispute him. He will speculate with other doctrinaires, and each will, in his own estimation, get the advantage in the contest. Then he will insist on his distillations being condensed at public expense. Commonly they refuse to materialize at all. All changes and innovations crowd along together in the name of progress and reform. The result is confusion and sometimes chaos.

The waste of educational energy and effort in consequence of the speculative mania and because of the clashing of different interests is great. The cost is greater than necessary, if not unreasonably abnormal. At least there is no reason why better and more telling work should not be performed with the money at the disposal of the system.

In my opinion this subject is one of preëminent importance. The school system must settle down and become a system in fact as well as in name. When it does it will the more effectually perform the work expected of it, and it will disarm the critics or be the better able to withstand the assaults which will be made upon it. It never will until competent general authority intervenes to define and limit the scope of its operations, to say what it must do in all places, what it may do in some places, and what it shall not undertake anywhere.

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COMPULSORY ATTENDANCE.

I offer one more suggestion in support of my general proposition. After providing the means to do with, after securing a competent teaching service, after defining the work which the schools shall do in order to justify their existence at general cost, it is imperatively necessary to exact the attendance of the children for a sufficient time to accomplish the object in view.

Of course, if any parent prefers to educate his child at home or in a private school, no one can object, if this is not a mere pretext and a sham, and if the education so provided is at least equivalent to what the public requires. But the public has the right to know that it is equivalent and to exact information which will justify a public acceptance of its work. No responsible institution can have the least difficulty in establishing this fact. There is no other way of insuring general results. * * *

We have legislated upon this subject, it is true; but we have legislated in a *dilettante*, milk and water fashion, which has been practically barren of results. There is almost an entire failure to appreciate the importance of the subject, or how to meet it. Legislators fear that they may offend some one who has a vote. America is not to be the refuge and stamping ground of socialists and communists and anarchists. It may be well to hang bomb-throwers and murderers, but is is better to prevent boys from growing up into thugs and outcasts.

Troublesome social disorders can be best met by early and alert legal regulations, and by none more effectually than by such as will bring all children under the instruction and discipline of the schools. The children of the depraved and indifferent are the very ones whom it is most important we should reach, if we expect to accomplish the end we aim at, and justify the theory upon which we are proceeding. It can be done, but only through practical and stringent legislation. We have had enough compulsory attendance laws with no one to execute them, and which no one could execute; let us have some which will compel, and will provide that some one shall compel.

Now, these four matters which I have mentioned, viz, suitable buildings and appliances, a professional teaching service, a defined course of study, and compulsory attendance upon the public schools, or upon other instruction of equivalent value for a fixed time, are vital to the success of our educational plan, and the safety of a social compact based upon the principle of universal suffrage.

Where is the authority which is competent to regulate such matters and insure decisive and necessary action? It is not in the Federal Government. Our governmental plan does not cede the control of educational interests to the national organization. It is not in county, or town, or district authorities. It is wisely and fortunately so, for many and obvious considerations. They are mere creatures of statutory law without original legislative or executive powers. The only authority which can act for this people is the imperial Commonwealth of New York, through the law making power which sits at Albany.

Functions of the State in relation to education.—President Seth Low, of Columbia University: It is every way becoming that the State, not the locality, should make the standard and should see that the standard which it makes is everywhere upheld. The question becomes, in substance, the practical question, what part of the work can the State do best, and what part the locality? It would seem to be clear that the minimum standard should be fixed by the State. If any locality cares to carry its work beyond this general standard, that privilege may cheerfully be conceded. But the general standard certainly should be fixed by the State; first, because the State is likely to fix it most intelligently; second, because only in this way can there be any uniformity of result, and third, because when education is shaped with reference to the work which is to follow, a result which the State alone can secure, the best results are reached. * * *

The scholar is threatened at every stage of his school life with an uneconomic use of his time, unless the steps of his progress be timed as well as directed by the best wisdom of the Commonwealth. There is always danger that the effort will be made to teach too much, to teach a smattering of too many things, instead of laying solid foundations broad and deep, and instead, above all, of teaching the pupil himself to observe and to think. I plead for an active oversight, at least, on the part of the regents, of the curriculum of every school in the public-school system of the State, I would have it a part of their duty to maintain such an oversight of the system in every locality that the results obtained in all places should measure up to the ideal, at least as well as the results in any other State; or rather, as a citizen of New York, I prefer to say, such an over-

sight that the results obtained in this great Commonwealth should be the recognized standard in all our sister States. It is not an idle dream, this ideal that there should be practical uniformity of results in all the schools of the State of similar grade. Germany accomplishes it through the benign influence in that particular of the central government. The only question with us is, whether we will let the State, which is ourselves, do a similar work for us with similar efficiency.

There is another element in the problem besides the shaping of the curriculum and the oversight of the work, in which the voice of the State must be clear and decisive. It must define, and define adequately, the qualifications of the teachers in the various grades, and, if necessary, test these qualifications. I do not mean that the State should in any way interfere in the actual selection of teachers. That by all means belongs to the localities who are to employ them. But the State should define the training and equipment which the teacher must have before he is eligible to enter any one of the public schools. Similarly the State might well fix the minimum educational requirements for the different positions of responsibility throughout the schools.

The General Government may stimulate public education.—W. T. Harris: It is clear that education is of vital interest to our form of government. The inhabitants of Mississippi have an interest in the education of the people of Pennsylvania because the voters of the latter State help to make laws which affect Mississippi. So Pennsylvania is vitally interested in the education furnished in Mississippi for the reason that Pennsylvania's national interests are partly controlled by the votes of Mississippi cast for President and for Congressmen.

Here is a text for a sermon on national aid to education and for national compulsory educational laws. But I trust that no person will draw the conclusion that we ought to adopt the centralized educational system of France, no matter how strongly he believes in the duty of the nation to look after education. Our doctrine of local self-government tends to increase the directive power in all places outside the centers. But this does not necessitate a "let-alone" policy. For the General Government may stimulate local action by subsidizing it, or it may pass laws compelling a minimum provision for schools.

The limit of the function of the State.—Jas. P. Monroe, in the Educational Review: Once having established the machinery of free schools, once having placed proper safeguards for its maintenance and protection, the State should determine the least that it must do to preserve its integrity and provide for its healthy growth. It should then rightly exclude from the school all that belongs to the parent as well as all that, being nonessential to the life of the State, ought to be left to individual effort.

Mischievous interference with the schools.—Educational News: Unfortunately for the poor teacher, nearly everybody, from the chief officer of a city or other school district, down to the man who drives a garbage cart, believes that he knows better how to manage the children and conduct a school than do those who have made it a life work, and for this reason both individuals and organizations offer their uncalled-for criticisms and push their mischievous interference.

Oh, for something for idle hands to do! The idle child is the mischievous child in school; he is also the mischievous child at home. Keep him busy and you are safe. But what shall we do with the idle man? It is he who concocts the mischief of the neighborhood. It is he who says "they say" and destroys men's reputations. It is he who too often is the critic of our educational work, and while he lounges on the store boxes of the village can tell just how the school ought to be kept and where its greatest weakness is to be found. Is there no plan by which this man can put the energies to work in profitable channels? How much better our schools would succeed; how much better off the whole community would be if we could only keep the idler busy!

Also this from across the water, same subject.—Revue Pédagogique Belge: For ages, the progress of school education was retarded by general indifference; today, on the contrary, the most formidable obstruction it encounters is the itch, or the passion, for innovations. In all countries, monarchic and democratic, everybody, from emperor to pastry cook, has upon the subject of education ideas which in his view will regenerate humanity. Naturally, the ministers of public instruction have their ideas too, and endeavor to put them into practice. Almost every one wishes to break away from what he is pleased to call the old usages, that is to say, from the experience of centuries, and to build up the course of study on a new basis. The lack of practical experience causes people to get

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astride of some of the strangest hobbies. One is wholly engrossed with gymnastics, another with chemistry; this one is inflexibly bent upon teaching anatomy and physiology to future seamstresses, that one is of the opinion that the youthful residents of the Rue du Temple will not be able to get along without some well-grounded knowledge of farming.

With the best intentions in the world, they would (in Paris) have turned the courses of study topsy turvy a score of times, and have completely ruined the public school instruction, if they had not had to moderate and guide them the learned and unpretentious Académie of Paris, with its inspectors and its active and energetic rector, M. Octave Gréard.

So, while no really useful innovations in the course of study, the methods, or the text-books, have been rejected, the literary basis upon which elementary instruction was founded, has been wisely retained.

The school of the future will not usurp the functions of the parent.—Superintendent A. P. Marble, Worcester, Mass. The school, having undertaken to train the intellect of boys and girls, is now quite generally expected to take entire charge of their education, intellectual, physical, and moral. This is beyond the original contract, and if so broad and general an end is to be attempted, then time must be given to enlarge the plant, to reorganize the system, and adapt it to such an aim.

If the school of the future is to take of the parent, and attend to the entire training of children—to be responsible for bodily health, intellectual training, and moral culture, if the duty of parents is to cease when once the child is old enough to enter the kindergarten, and the school is to turn him out fully equipped for the battle of life, and for entrance into a blissful hereafter, then we must have a good deal more time and more funds. It would seem as if so broad an aim would need to include dormitories, clothing, stores, and refectories. Such was the Spartan scheme of education. It is not likely to be repeated. It is not desirable. Nothing of a public and institutional nature can supply the place of parents. They were ordained of God; and no incubator of modern science or education should ever supplant them. The duty of rearing and disciplining their children ought to be thrown back upon them to the largest possible extent; any institution or any school which tends to beget in the parental mind a feeling of irresponsibility is evil and only evil, and that continually. The school of the future will not usurp the functions of the parent.

The aim of the school.—Principal George M. Grant, Queen's College (Ontario): We must remember that the object of the common school is not industrial. It should not regard children as the raw material of craftsmen, and aim at making infant mechanics. Children are organisms in the flower of life, and the best fruit will be had if you give the flower free play and do not expect it to be fruit. The fruit will come in due time, if you do not handle or test the flower too often. The aim of the school is to make children happy, healthy, and natural; to give them a love for their country and for one another; to open their eyes to the beauty of nature and the meaning of life; to give them a love for reading, and a taste that will enable them in some degree to discern good reading from bad; and to form in them habits that will make the end of their school days to be but the beginning of their education. It may be said that all this and more too is being done now. Possibly it is in some places. Improvement, too, there has been of late years, in the general diffusion of education and educational appliances, and, above all, in the increase of popular interest in the common school. But no one will say that the influence of teachers or society, or the influence of school on the formation of character, is what was at one time hoped for; and how, then, can we profess to be satisfied? Unless the people are becoming more intelligent and more moral, the school has failed. Unless there is a higher political life the state can not be satisfied. So great are the possibilities of the public school, however, that despair must not be thought of.

What socialism in education tends toward.—James P. Munroe, in the Educational Review: If the State, that nonentity for which each one of us and therefore none of us is responsible, is to bring up my children for me; if morality, good manners, and the domestic virtues are to be taught by some one else while I am but to provide the material things of life; then, forsooth, I will lay aside such sums as may meet these temporal wants and with the balance, large or small, will eat, drink, and be merry; for surely I have no better use in the world. The fact that in a few generations the State will fall to pieces is not for me to consider, since I am credibly informed that the sacred duty of maintaining it is taught in the schools. This wicked and absurd result of socialism is, of course, extreme.

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There are, fortunately, human tendencies retarding such a mad career as this. Of these are avarice, making us save even when there is no direct motive for saving; family pride, unwilling to resign the task of chaping its heirs; and above all, parental love, refusing to deny itself to its offspring.

What the public schools can and can not do—kindergarten training.—State Superintendent A. S. Draper, of New York: The business and industrial world is in a ferment. The educational world is no less so. All manner of schemes are on foot. Everything is expected and demanded of the schools. Specialization and experimentation are the order of the day. The schools are sympathetic with this spirit. In my opinion there is danger in it. It is a tendeney which is to be resisted. The schools can not specialize. They can not undertake to fit a child for any particular field of labor for they can not cover all the fields. They can not teach him all he is ever to know. They can arouse his faculties. They can give him the elements of an education upon which he can build for himself and they can stimulate his ambition so that he will want to build for himself. If they do this they will do much. This much will not be accomplished if the schools attempt to do special things or if the work of the schools is allowed to become involved in uncertainty and confusion.

In so many cases as to be practically universal the child will remain in the school but a few years. He may be expected to withdraw at any time. Then the most scientific and painstaking work must be done in the first years. If there is unusual care or large expense it must be there. The idea that persons of little learning or who are without professional training can teach the youngest children, must be discarded. The greatest expertness must be placed where it will reach the greatest numbers and perform the best and most lasting work. We must proceed as though each year may be the last in which the child will have the benefit of the schools.

The child is to live in contact with affairs. He is to live by his hands and his eyes as well as by his ability to reason. His value as a citizen and his success as a man depend as much on his ability to do as on his ability to think and perhaps as much on his sense of right as on either.

Then he is to be educated practically. He is to be taught to put his hands and his eyes to their best uses. More than this, he must be disciplined. His moral sense must be aroused. He must be brought into sympathy and harmonious relations with nature and with affairs. We can not neglect this until we arrive at the age at which children may advantageously handle tools, and then expect to accomplish much. Something must precede the handling of tools. Half the children will have left school before that time. A carpenter shop connected with a high school is a feeble thing with which to bestow a practical education upon the children of a sizeable city. But the kindergarten will do it. It is at the right end of the course. It may reach every child. It harmonizes with the other work of the school. Children love it. It lengthens their time in school. Otherwise its results are extraordinary. It arouses an interest in natural objects, as stones and trees and animals. It cultivates social amenities and asserts mutuality of rights and obligations. It quickens the moral sense. It sharpens the observing and perceptive faculties. It forms and develops the constructive powers. It cultivates the æsthetic taste. The laying of straws, the weaving of mats, the folding of papers, the blending of colors, the molding of sand and the modeling of clay, train the eye to exactness and the hand to deftness at an age when such training is effective and influences the whole after life, If beyond this children are taught obedience, punctuality, neatness, some knowledge of themselves, if they are taught to spell correctly, to speak grammatically, to write legibly, to read understandingly, if they are taught the fundamental principles of mathematics, and if it is done in a cheerful way so that the teacher will be looked upon as a friend and helper, the public schools will have met measurably the responsibility resting upon them. If the attendance can be general and regular the schools will make the citizenship of the State industrious, well-disposed, and safe.

XII.—Reading and Literature.

Classical literature the basis for ethical training.—President Charles de Garmo, of Swarthmore College: The advantage of the classical, imaginative literature for the young is that it portrays the ethical lessons of life in a form that most powerfully appeals to the child's natural interests. To many it is a familiar thought that the stages of a child's mental development correspond to the stages of culture through which the world has passed. If this is true, as it must be in some

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sense, then thoughtful experiment with classical literary forms will enable us to find that best adapted to any given stage of child development. All education is a process of attaining intellectual and moral freedom. The true fairy tale not only embodies an ethical truth, but it frees the puny child from the iron bands of time and place and circumstance. The child of penury may dwell in marble halls with princes of the blood and eat the food of the gods. Mrs. Burnett has beautifully illustrated this power of the imagination in "Sara Crew." The curly-headed lad at his father's knee may quickly become the armed hero, doing mighty deeds for the right. This emancipation from the physical limitations may soon be transformed to the moral field. I have said that it is the mission of literature to enable the individual ideally to pass through the experience of the race without the pain that the original experience cost. What a weary round of scourgings the race has gone through to arrive at its present state of material, political, and ethical freedom! All this is portrayed figuratively in literature, and literally in history. The child is born now, as ever, with all his experiences before him. Must he, for the lack of education, tread again the thorny path of his race? We do not ask it with regard to his material or intellectual welfare; why should we with the moral? Shall we not rather portray the inevitable struggle in forms that he can understand, teaching him to win the victory before the battle is fought.

The basis for ethical training in elementary education is to be found, therefore, primarily in a graduated course in classical literature, beginning with fairy tales, myths, legends, and folklore, and culminating with the higher dramatic literature; and secondarily, in the concrete biographical and narrative elements of history.

The best literature for children.—Principal George M. Grant, Queen's University (Ontario): The difficulty of teaching literature to children is very great, perhaps greater than of teaching history itself; and the usual mistake is in being too formal, too didactic, too analytic, and too ambitious. The children must be interested only through their imaginations. Mr. Gradgrind would give them "facts." I would give them stories and tales instead—books like Hans Andersen's and Grimm's tales, the Arabian Nights, Robinson Crusoe, and the Synoptic Gospels, to begin with, to be followed by Scott's poems, selections of ballad poetry and selections from Scripture. "The best literature for children from their seventh to their fourteenth years," says Rosenkranz, "consists always of that which is honored by nations and the world at large," and if the books I have mentioned are objected to, choose at any rate others that have stood the test of time and a jury that may be said to comprise universal humanity.

Should not anatomize in teaching children literature.—Miss N. Cropsey: A vast amount of time is wasted by presenting the common and the crude in reading and literature, because we fail to understand the poetic spirit in which the child interprets the world. It is not necessary to know the exact meaning of each word in a poem in order to be instructed and inspired by its general sentiment. The world comes to us first as a general impression; it may be dim and obscure; its diversity is interpreted in relation to this whole. Our primary schools ought to teach the best that literature has to offer, not the most complex or the most obscure in meaning, but some expression of other than the literal and disconnected view of things.

The analytic processes may entirely absorb the time of the child in school, and completely obscure his poetic view of the whole which he brought to us out of the land of early childhood, leaving him on a barren plain of facts, cut off from the living spring of imagination and reason. The eye of the poet integrates the parts and feels the living spirit which animates and unifies nature, though he may not be able to give a scientific classification of its forms.

He will get much more than we imagine.—Intelligence: Reading should be encouraged with the earliest ability of the child to read, and continue through all his public school career. There is slight danger of the child reading beyond his depth. What if he does not seize all the thoughts if he only begets a taste for ennobling literature? He will get much more than we imagine, and will grasp it with a firmness we little suspect.

The teaching of English literature.—The following remarks upon the methods of teaching English literature were written by a graduate of the Worcester (Mass.) Normal School and read by Hon. A. P. Marble at a meeting of the New York State Teachers' Association:

If I am to teach literature to a class of boys and girls, I must have my target, just as truly as the child with the bow and arrow in his hands must have his. I

must know at what my teaching is aiming, or I shall be as likely to fire into the ground as at the stars.

I begin with the hypothesis that literature is to be studied in our high schools as a form of culture and education beneficial to our growth, though, it may be, not directly helpful as a preparation for bread-earning. If one were to ask a class of boys and girls, after a year's study of literature, in what way they expected to use their knowledge, I imagine he would get some such answers as these: "I shall be able to make a great many pat quotations." "I shall be able to talk on literary subjects." "I shall be able to use better language." "I have got started in reading and in thinking for myself;" or, perhaps, "I don't suppose I shall ever use it at all."

These answers, with the exception of the last, are reducible to two purposes: To show off what one has accomplished, and to be able to accomplish in the future.

If one's education is to be only an end, and not a means to something further, it is a poor thing to waste fifteen years of work for, and not usually worth trying to show off. It is what one is, or is able to become as the result of the work he has done, rather than the exact measure of knowledge he has gathered together, that is of value to him. Things plastered upon the outside of a person soon wear off and show the old texture through. That which is taken in as a germinating force, fostered and helped to grow, changes the very fiber of the mind, and makes it able to be and to produce that which it could not have been or produced otherwise.

The activity of the mind is of course thought. And just in proportion as we can increase the thoughtfulness, the habit of thinking deeply and independently, just in that proportion can we give vitality and strength to the intellect of a youth.

Young people think, of course. But what about? Take a class of boys and girls 15 or 16 years old. What sort of thoughts are making themselves at home in their minds, to order their affairs? There is the last ball game, the tennis match, the new spring dresses, the next dancing school, endless novels, with many tedious school books from which to economize time for more interesting things. Here is much thinking, but little thought. Much of it a very healthful kind of thinking, but not just the kind that is going to bring them out men and women, intellectually wide-awake, serious, and clear-sighted, the kind of men and women we need.

Take this class of young people and get them deeply interested in a play of Shakespeare. The plot itself can be trusted to get their interest. Then just make those characters live to those boys and girls; and if Iago and Othello, Macbeth, Portia, and Hamlet do not teach them some lessons about themselves and their relations and duties to their fellow-men I am greatly mistaken.

Make them hear a little of the music of Milton, entertain them with some of Dickens and Scott, get them up to their ears in discussions over the philosophy of Ralph Waldo Emerson. In each case pick out the great gift, the leading characteristic of a writer, and just make that one point tell on the thoughts of the pupils. Above all things, do not discourage the pupils from making their own comments and expressing their own opinions. They will often seem ridiculous to the teacher; but youth is the time to be ridiculous, and mistakes are the surest way to correct ideas.

Would I have them learn quotations? Certainly. Things committed to memory are seen in the many different lights of after reflections, while a thing read once has but the light of a passing mood.

But committing to memory should not be the chief work of a class, and pupils should be tempted and praised, rather than driven and scolded, to quotation-learning.

It is very common, too, I think, in the study of literature, to require a pretty full biographical account of the life of each writer studied. This would do very well for a psychologist or a philosopher, or even for a man of mere general culture, provided he were 60 years old. And so with long criticisms and books about books; they are well for the writer of 40. But give these young boys and girls the works of great men, pure and simple, and let them feed on them and grow mentally and morally.

In my opinion it is better, too, not to include very many writers in a school literary course. Just as it is better to have a good talk with one intellectually great man than to have an introduction to 40, so it is better to know 1 poet than to know 40. To study literature and to study the history of literature are two different things, and they should not be exchanged for one another. But the life is in the literature, not in its history.

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XIII.—Religious and Moral Training.

Religion in education.—Brother Azarias: Religion is sacred, and because it is so sacred a thing it should not be excluded from the schoolroom. It is not a garment to be donned or doffed at will. It is not something to be folded away carefully as being too precious for daily use. It is rather something to be so woven into the warp and woof of thought and conduct and character, into one's very life, that it becomes a second nature and the guiding principle of all one's actions. Can this be effected by banishing religion from the schoolrcom? Make religion cease to be one with the child's thoughts and words and acts—one with his very nature—at a time when the child's inquisitiveness and intellectual activity are at their highest pitch; cause the child to dispense with all consciousness of the Divine Source of light and truth in his thinking; eliminate from your text-books in history, in literature, in philosophy, the conception of God's providence, of His ways and workings, and you place the child on the way to forget, or ignore, or mayhap deny that there is such a being as God and that His providence is a reality. The child is frequently more logical than the man. If the thought of God, the sense of God's intimate presence everywhere, the holy name of Jesus be eliminated from the child's consciousness and be forbidden his tongue to utter with reverence in prayer during school hours, why may not these things be eliminated outside of school hours? Why may they not be eliminated altogether? So may the child reason; so has the child reasoned; and therefore does the church seek to impress upon it indelibly the sacred truths of religion in order that they may be to it an ever-present reality.

Not that religion can be imparted as a knowledge of history or grammar is taught. The repetition of the catechism or the reading of the gospel is not religion. Religion is something more subtle, more intimate, more all-pervading. It speaks to head and heart. It is an ever-living presence in the schoolroom. It is reflected from the pages of one's reading books. It is nourished by the prayers with which one's daily exercises are opened and closed. It controls the affections; it keeps watch over the imagination; it permits to the mind only useful and holy and innocent thoughts; it enables the soul to resist temptation; it guides the conscience; it inspires a horror for sin and a love for virtue. The religion that could be cast off with times and seasons were no religion. True religion may be likened to the ethereal substance that occupies interstellar space. This substance permeates all bodies. There is no matter so compact that it does not enter, and between the atoms of which it does not circulate. Even so should it be with religion. It should form an essential portion of our life. It should be the very atmosphere of our breathing. It should be the soul of our very action. We should live under its influence, act out its precepts, think and speak according to its laws as unconsciously as we breathe. It should be so intimate a portion of ourselves that we could not, even if we would, ever get rid thereof. This is religion as the church understands religion. Therefore does the church foster the religious spirit in every soul confided to her, at all times, under all circumstances, without rest, without break, from the cradle to the grave. Place yourself, at this point of view, and say, if believing all this, child of yours should receive any other than a religious education.

How piety can not and can be taught.—Carlyle: Piety to God, the nobleness that inspires a human soul to struggle heavenward, can not be "taught" by the most exquisite catechisms or the most industrious preachings and drillings. No; alas, no. Only by far other methods, chiefly by silent, continual example, silently waiting for the favorable mood and moment, and aided then by a kind of miracle, well enough named "the grace of God," can that sacred contagion pass from soul into soul. How much beyond whole libraries of orthodox theology is, sometimes, the mute action, the unconscious look of a father, of a mother, who had in them "devoutness, pious nobleness!" in whom the young soul, not unobservant though not consciously observing, came at length to recognize it, to read it in this irrefragable manner—a seed planted thenceforth in the center of his holiest affections forevermore.

Can morality be taught in our public schools apart from religion and theology?—Nicholas Paine Gilman: The great facts and the main laws of the moral life are obvious to all mature men and women; certainly they are not dependent, for their clearness and their binding force, upon any notions as to the origin either of the universe, of mankind, or of the perception itself of these facts and laws. The facts of astronomy which affect men's daily life—such as the so-called rising and setting of the sun, the phases of the moon, and the phenomena of the ocean

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tide, for instance—are plain to every one; the explanation of them given by the astronomer to the farmer and sailor, whether correct or not, will not essentially change the arts of agriculture and navigation. So the common practical duties of human beings have long been familiar. Each new generation must learn them afresh, indeed, but it learns every day morality as an art, not as a science. The difficulty lies in the practice, not in the theory. Philosophers may dispute as to the exact reason why a man loves or should love, his mother; but the duty of loving one's mother is not a question considered open to discussion in common life. The same may be said of the other obligations which make up the substance of their duty for the great mass of mankind, in all but exceptional times and situations.

When, then, we have in mind as a subject for public school instruction, not the science of ethics, not the speculations of moral philosophers, but the orderly presentation of the common facts and laws of the moral life which no one in his senses disputes, we perceive how the religious or theological difficulty at once disappears, to a large degree. There is possible a theistic explanation of the moral law; there is possible an atheistic explanation; but there is a third course open here to the common-school teacher—to attempt no such final explanation at all. It is not necessary for him to teach that morality rests upon religion as its ultimate foundation; it is just as unnecessary for him to teach that religion, on the contrary, reposes upon morality as its basis. Let the relation of religion and morality be as it may be: the teacher is not called upon to decide an issue of this magnitude. He can teach the duties of ordinary life, showing their reasonableness and their interdependence in a consecutive, orderly manner, without appealing to religion; he can use the plain and usual consequences of actions, good or bad, as reasons for morality, without being open to a just accusation of irreligion. These consequences, as he should teach them, are admitted by all. * * *

Such a limitation bars out all matters of theological controversy. The sectarian difficulty and the religious difficulty in moral education disappear when we keep to conduct and its common laws, and stop short of theological or philosophical explanations why right is right or wrong is wrong.

General method of moral instruction in public schools.—Nicholas Paine Gilman: The one principle to keep firmly in mind is to avoid didacticism ("preaching") as much as possible, and to hold fast to actual life as children already know it, or may be led to comprehend it. Concrete instances of right-doing or wrong-doing, happening in the schoolroom itself, or just outside, within the immediate knowledge of the boys and girls, afford the best starting point for talks about the moral points involved. It will be easy to bring the children's minds, through a consideration of actual examples, to recognize in some degree the general principles involved. The same caution needs to be urged here as in the case of other general notions, against haste and consequent disregard of the immaturity of the childish mind. But if the teacher will shun formality and generality, and keep mainly to the particular and the concrete, he will find that few subjects interest children more than these questions of right and wrong in common conduct. These men-and-women-to-be find people the most attractive matter, just as they will find them later in life. Man is not only the "proper," but also the most engaging "study of mankind," large or small. Conduct is to children, who have not yet entered upon the great activities of business, art, or science, much more than "three-fourths of life," and the lines of it on which they are beginners will continue unbroken through all their years. Elaborate casuistry, hair-splitting about imaginary situations, anything and everything in the line of pure ethical theory, should be utterly tabooed in the school room. But with these precautions observed, and under the guidance of a teacher of well developed moral sense, boys and girls between 8 and 14 years of age (in the grammar schools, where moral education has its most fruitful field) will reason about points of ethical practice with interest, and often with a freshness and an acuteness that are surprising. If this be not so, then these children in school differ very much from these same children out of school.

If the course of study is, anywhere, so full or crowded as not to allow time for the occasional talks (one or two a week) about conduct, which I should advise as the best method, then that course should be shortened by the omission of some branch of much less useful knowledge sure to be found in it. I would avoid set times for these conversations; in them, question and answer should play a large part; the more easily (if not very frequently) the teacher "drops into" one of them for a few vivacious minutes, the better. Some incident of the schoolroom life that has just occurred, or some matter in the lesson in read-

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ing or history may well interrupt the routine of the ordinary recitation, as the teacher asks the opinions of the class or of the school on the moral point in question, incites them to think more carefully about it, and indicates the conclusion to which long experience has brought the world the starting point, at least, for the majority of these ethical talks, for, like every other social institution, it has its moral law which must be observed by all its members in order to attain its end. The plainly visible chief function of the public school is to impart the elements of knowledge. To this end there must be full obedience to the natural authority, the teacher; the prescribed conditions of quiet, order, and studiousness must be observed by the pupils. Punctuality in attendance and readiness for all the exercises; truthfulness in regard to absence from school, tardiness, or any other failures to comply the regular order; honorable conduct with respect to methods of passing examinations; polite treatment of the other scholars; attention and courtesy to the teacher, such are some of the moral necessities of the schoolroom to be met by the scholars.

The pupils have no duties which should not be met by an equal faithfulness to his duties on the part of the teacher, who should not be there teaching unless interested in his work, qualified for it, and industrious in improving his practice of it. He must be just and impartial in his treatment of the scholars; he must, having the authority, exhibit the virtues of a ruler. Teaching politeness and honor, the instructor should be an honorable gentleman. * * * The teacher has no direct influence over the pupil except in the school hours, and his earnest efforts may be rendered almost useless by the indifference, or the hostility even, of parents. But none the less must he strive to connect the morality of the schoolroom, which he can enforce, with the morality of life outside, as resting on the same general principles of reason. While the first rudiments of common sense will keep him from speaking of any vice, such as lying or stealing or drunkenness, in such a way as to proclaim his knowledge that it prevails in any scholar's home, he is still free to enlarge upon the manifold evil consequences of it. Thus his word may help somewhat to keep children pure in the midst of a bad home atmosphere, which he is otherwise powerless to change.

"Words"—this will usually be easy for the teacher to give in attempting moral education; but nowhere else does word amount to so little compared with example. If the word is not reënforced by the example, its influence will be small.

Practice fortified by theory.—George P. Brown, chairman committee of National Council of Education: It is probably evident to all that the writer believes in inculcating morality by practicing it rather than by theorizing about it. But the time comes in the education of the child when the doctrine that has guided the teacher in fixing dominant ideas in the mind of his pupil shall be made known to the pupil. Although, as in many other matters, the theory of morals may well be left until the pupil is well on this way, in the practice of morality this does not preclude the formulating of moral principles and laws which are exemplified in conduct whenever the child is prepared to recognize them in this form, and the organization of these into a system of ethics at a later period would be the culminating act of an ideal method of educating the will. A failure to reënforce the practice of right-doing by a rational theory of one's relations and consequent obligations would be to omit the most effective defense against the ever-recurring attacks of passion and sense.

Moral habits induced by school work.—State Superintendent Richard Edwards, of Illinois: The schools must develop moral power. In this world there is just one thing that has absolute worth, and that thing is character in men and women. These surroundings of ours which we so much value are after all only means to a loftier end. They have worth, these outward things, because they contribute to the good of man; otherwise they are without value. * * *

What is this child's aim in going through an arithmetical process? What is he seeking for, when, for example, he is attempting to cast the interest on a note or to add up a long column of numbers? He is seeking to know the truth. He is not inquiring what somebody would like. He is not seeking to find an answer that will please a sect, or a party, or advance his own pecuniary interests. What he is seeking is the absolute truth. If he is casting the interest on a note, he desires to know what absolute justice requires to be done. If he is adding up a column of figures he is yearning to ascertain the precise and actual amount which they represent. In the study of history he is striving to ascertain what events have actually occurred, not what someone would like to make someone else believe has occurred. In short, the purpose of all school investigation is

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to find the truth. Is not this a good motive? Is not the habit engendered by this work a wholesome habit? Suppose the same motive should govern the actions of all adults. Suppose that every editorial in a newspaper, every speech delivered from the stump, every sermon delivered from the pulpit, should be animated by the same desire. Would it not be something of an improvement upon the existing order of things?

The crowning purpose of education.—George P. Brown, chairman of committee. National Council of Education: The crowning purpose of education is to make the will follow the lead of conviction in all matters involving the idea of duty. The moral will is the significance, so to speak, of all the other activities of the mind. Institutional life is the moral will as it has realized itself. The ethical ideal is actualized in human society to the extent that it is common to the particular members. The principle of conduct in the ethical world is what is known as the moral law. This law is the universal conviction that every act of each particular member of the ethical whole should be such that when universal, that is, becomes the act of all, it will return upon the doer to bless and not to curse him. In this way the institutional world becomes a ministration of grace, each citizen receiving a return for every good deed, the good increased a thousand fold.

Religious instruction in the schools of Ontario.—Hon. George W. Ross, minister of education: Every school is required to be opened by the reading of Scripture and by prayer, and closed with prayer. In the Roman Catholic separate schools the religious exercises are subject to the direction of the trustees. No pupil is required to attend upon the religious exercises of the public school whose parents or guardians notify the teacher of their desire that he should absent himself. Provision is made for religious instruction by arrangement with the trustees of any denomination at such hours as may be agreed upon.

Reform the home first.—Popular Science Monthly: If the clergy, instead of making futile demands for the teaching of theological dogmas in the schools, would try to rouse the minds of their adherents and followers to a sense of their personal responsibility for their childrens' characters, they might accomplish a more useful work. This is something which they should preach in season and out of season; and if they would do so with the earnestness which the occasion demands, the effect might in a few years be seen in the altered moral tone of a portion of the public-school teachers themselves; and thus, concurrently with the elevation of the home, we should have a notable improvement in the work of moral education as carried on in the schools. Reform the home, and the whole face of society will be reformed.

Catholic views on the right of the state to educate.—Declaration of principles by Cardinal Manning (English): 1. The children of a Christian people have a right by divine law to a Christian education. 2. Christian parents have a twofold right and duty, both natural and supernatural, to guard this inheritance of their children. 3. Christian children are in no sense the children of a state that has no religion. 4. Their teaching and training or formation as Christians is of higher moment than all secular instruction and may not be postponed to it or risked to obtain it. 5. In the selection of teachers by whom their children shall be instructed Christian parents have a right and a duty which excludes all other human authority. 6. To deprive the poor of this right and liberty, which is claimed by and yielded to the rich, is a flagrant injustice.

These also from Cardinal Manning[1]: State education is the worst form of education, fatal to the independence of national conscience, energy, and character. * * * You can force us to pay your rate, but you can not rob our children of their religion. * * * [The] moral unity of a people drilled by state education and state pedagogues and state policy is spectral and lifeless. * * * To compel the parents of a Christian people to send their children to schools where no religion is taught, as in America, or where the Bible is only read, without interpretation, or without its true interpretation, or, still worse, with erroneous interpretation, and by interpreters untrained and incompetent to interpret, is a violation both of natural and political justice. It is an outrage on the natural rights of parents and on the religious conscience of a Christian people. The common-school system in America is a case in point.

Rev. Thomas Bouquillon, professor of moral theology, Catholic University of America:[2] Civil authority has the right to use all legitimate temporal means it

[1] Quoted by John A. Mooney in the Educational Review, as are Dr. Becker and Hon. E. F. Dunne, further on.
[2] Education: To Whom Does it Belong? p. 12.

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judges necessary for the attainment of the temporal common welfare, which is the end of civil society. Now, among the most necessary means for the attainment of the temporal welfare of the commonwealth is the diffusion of human knowledge. Therefore, civil authority has the right to use the means necessary for the diffusion of such knowledge, that is to say, to teach it, or rather to have it taught by capable agents.

John A. Mooney, in the Educational Review, in reply to the foregoing syllogism of Dr. Bouquillon: All that is necessary to the welfare of the State is not within its competence. If it were otherwise, then the State could claim a right to teach religion, for religion is necessary to the welfare of the State. There are legitimate and temporal means necessary for the temporal common welfare, and not within the State's right. The procreation of children, an able critic safely claims, is necessary for the welfare of the State, and a means both legitimate and temporal. Still no one will concede that the State may compel all the citizens to procreate children. Logically the state, in whose behalf the reverend doctor argues, is the socialistic state. The diffusion of human knowledge which he concedes to the State is, as we have seen, that large diffusion possible within the boundless limits of the three R's. One might as reasonably deny that this "education" is sufficient as to claim that it is necessary. And by what authority, some one will ask, does he determine that "the right to use the means necessary for the diffusion of human knowledge" is to be understood as "the right to teach it, or to have it taught?" Why shall not we define the "means necessary for the diffusion of human knowledge" as a something more or less than teaching?" The professor's conclusion agrees with his own views. It is, however, not a logical conclusion, but an assumption added to the various assumptions made in his premises. His critics have called Dr. Bouquillon's attention to these and to other defects in his method of reasoning. Having based himself on premises not true, and on a conclusion doubly illegitimate, was he safe in "affirming that the larger number of theologians admit that the State has the right to educate?" With perfect safety it may be affirmed that if the larger number do admit such a right, most certainly they base their admission on some more flawless syllogism. As a matter of fact, no theologian to whom the reverend doctor has appealed admits the right of the State to educate.

Right Rev. Thomas A. Becker, D. D., Bishop of Savannah: We do not doubt that the time is fast approaching when the State will confine herself to her legitimate duties, of the which there are enough, and those sufficiently onerous, without undertaking to supply us with a secular instruction which we do not want in any other manner than as a handmaid to religion, and with which, so accompanied, no government can furnish us. Were it even possible, such a power is too liable to abuse to be left in any governmental hands; and finally, upon parents, as such, devolves the responsibility for the souls of their offspring, and we dare not, even if we could, shift it from where the Almighty has placed it.

Hon. E. F. Dunne (in an address at the Catholic Congress, Baltimore, 1889): Morality is the only foundation of order. Therefore the State not only may but must assist in the production of morality. It must do it or die, for without morality order is impossible, and without order the State can not live. There can be no morality without religion. Therefore the State which wars upon religion undermines its own foundation—precipitates its own destruction. Moral culture is of more importance to the State than any other; instruction which does not give it is not education. Therefore the State should encourage education full and complete. To aid in education the State may endow schools and assist teachers, but—itself to teach? No! That is beyond its charter, beyond its rights, beyond its power.

Compulsory teaching is of inferior quality.—The School Journal: That teacher who is throwing out the strongest moral influences in her school is the least conscious of it. It is unconscious radiation, as flowers fill the air with fragrance. There is a certain benefit to a school, from carrying out a programme of morals—that is, a programme that has certain times and occasions and ways laid down for the imparting of moral instruction. But like all compulsory teaching it is of inferior quality compared with that which flows out naturally from every pore of the teacher's soul.

Not new.—H. C. Hardon, master Shurtleef School (Boston): That old lie that there is no religion in the schools.

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XIV.—School Management and Discipline.

Uniformity and freedom.—F. W. Parker, Cook County Normal School: Uniformity may be a necessity in the evolution of a school system, or any other system; but there comes a time when this rough staging should be torn away. The next period of evolution must be a period of liberty, that liberty so restricted that it will lead to freedom. Merit in fixing uniformity is complete skill in routine duties, a strict compliance with conventional demands, the order that keeps pupils still; the teaching that complies with the letter of a course of study; the drill that passes classes *en bloc* from grade to grade; the spirit that humbly bows to dogmatic rules. Under uniformity, teaching is a business and not an art. A business is governed by fixed rules; an art by eternal principles.

Think for a moment of a great corps of teachers, each imbued with a divine enthusiasm of study and a firm devotion to the highest interests of humanity; each striving to find more and more of truth, and to apply it for the weal of the child. Think of each giving freely to all the treasures and truths that he finds, and receiving as freely from all, their discoveries. Under such circumstances we would not have to search with a Diogenes lantern for a first-class teacher.

XV.—Secondary Education.

Free high schools unwise.—James P. Munroe, in the Educational Review: The maintenance of free high schools is unwise; first, because it obliges a whole community to pay for what only a limited number can enjoy; second, because, necessarily expensive, it robs the lower schools of funds essential to them; and, third, because it offers to boys and girls wholly unfit for secondary education a temptation to exchange the actual benefits of remunerative work at 15 years of age for the doubtful advantage of a training that can have no direct bearing upon their life work, and which, at the time of life it occurs, may do decided harm. The State must, of course, take the initiative in providing secondary schools separate from or in connection with those already established by private enterprise, and it must maintain such course of study as the needs of the community demand; but for these courses there should be a graded system of fees, regulated by the nature and extent of the studies pursued, and, while a certain proportion of the cost of their support might be assessed upon the taxpayers, the larger share should be borne by those in attendance. When such a school ceases to be mainly self-supporting, the town or school district should have power to suspend it until the demand for reopening justifies its revival. In this way only can the high school do the work that should be required of it; only by such a pruning can the primary and grammar schools receive the money and attention they deserve; and after such a bold first step can a real reform of the public-school system be begun.

Public high schools vs. academies.—Intelligence: The public high schools, especially those of New England, are steadily coming to the front as the schools which give the most thorough and useful preparation for college. Three times within a few years the valedictory at Yale has been awarded to a student whose preparatory studies were in the New Haven High School.

The rise of the public high school as the crowning feature of the system of common school education is a most interesting fact. In several of the New England States these schools have caused the delay of most of the old-time academies which were once flourishing institutions, or at all events their relative decay. Except a few which, by reason of their large endowment or some especially favorable condition, have grown with the growth of population, they have fallen into comparative obscurity.

Suggestions as to the curriculum of the preparatory school.—President D. C. Gilman (in the Cosmopolitan): Whenever the time comes for a revision of the curriculum of the preparatory school, three subjects should receive much more attention than is now given to them. The study of science should be so pursued that the habit of close observation and of reasoning upon ascertained facts should at least be initiated. Nature should be approached by the schoolboy as a willing and ever-present teacher. Her lessons should be the delight of every adolescent. When we remember that in contemplating the heavens, in watching the life of plants and animals, in the observation of the modes of motion and in studying the inorganic world there are innumerable and infinitely varied opportunities to awaken curiosity, to train the eye and the hand, to exercise the judgment, to reward investigation—how strange that so little progress is made in the introduction of scientific studies in elementary education! Modern lan-

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guages also, especially French and German, are nowadays indispensable in a liberal education; and they are much more readily acquired in childhood than maturity. How are they to get just recognition in the preparatory schools? An acquaintance with the Bible should also be required of every schoolboy. College professors have lately been showing how ignorant the youth of America are of the history, the geography, the biography, and the literature of the sacred books. I do not now refer to its religious lessons, but I speak of the Bible as the basis of our social fabric, as the embodiment of the most instructive human experiences, as a collection of poems, histories, precepts, laws, and examples, priceless in importance to the human race. These Scriptures have pervaded our literature. All this inheritance we possess in a version which is unique. Its marvelous diction, secured by the revisions of many centuries, and its substantial accuracy, the care of many generations of scholars, are beyond our praise. But how little study does the schoolboy give to this book in secular or sacred hours; how ignorant may he really be of that which is supposed to be his daily counselor! Science, modern languages and the Bible have been so long neglected in preparatory schools that it is extremely hard nowadays to find effective teachers for these subjects. There is no consensus as to books, no tradition respecting methods. Perhaps we are waiting for the waters to be disturbed by the angel of deliverance, but we shall wait in vain unless we put forth efforts of our own to reach the true remedies. The day will come for better things; we can see its approaches.

XVI.—TEACHERS.

Is special preparation for teaching indispensable?—Superintendent Henry Sabin (Iowa): Shall we say that special preparation for the teacher's work is not desirable? Certainly it is very desirable, but it is not indispensable. There are only four indispensable requisites—knowledge of subject-matter, uprightness of character, a desire to improve, and common sense. With these as a foundation we may build an Arnold, an Agassiz, or a Philbrick. If any one of these requisites is wanting, no amount of professional study or reading of educational books can supply the deficiency. There has broken out lately a mania for high intellectual development, which the teacher expects to attain by reading a book a month. Teachers sometimes become gormandizers of books. Dickens says of one of his schoolmaster characters, after enumerating a long list of his requirements: "Ah, rather overdone, Mr. Choakumchild. If he had only learnt a little less, how infinitely better he might have taught much more!"

Superintendent J. M. Greenwood (Kansas City, Mo.): It might be as well to state clearly that all this talk about making good teachers without professional training is of little value to the schools. There is no equivalent for professional training. * * * Let us understand it, and not beguile ourselves into long-winded discussions in the vain search for temporary substitutes.

Superintendent Draper, of New York, remarked on this subject that he was sorry to note a disposition on the part of one or two speakers to disparage professional training altogether. It was too late in the history of educational progress to do this. Such sentiments are outlawed—are back numbers. It was not worth while to argue with men who had been enjoying a Rip Van Winkle slumber and were out of touch with the general educational sentiment of the country.

Four propositions worthy of consideration.—Superintendent Henry Sabin (Iowa):

1. Pedagogical research, educational inquiry, the study of methodology alone, can never constitute a man a teacher. The machine which makes the teacher a mere automaton is already producing alarming results in this direction. In many of our schools we are approaching the danger line of killing off individuality, of crushing out spontaniety, of dwarfing the teaching ingenuity by reducing everything to the dead level of certain so-called philosophical methods. We are training the teachers to follow the ruts.

2. There is a failure with teachers, if I may use the expression, to distinguish between an individual method and a representative method; between an arrangement which is the invention of the person using it, partaking largely of the nature of a device, and a method which is typical in its nature—which exemplifies the essential characteristics of all related methods. A device is the creation of the teacher—a method is based upon eternal truths.

Our schools of methods are very often only schools of devices.

3. The school which gives its students power of thought, clearness of expression, aptness of illustration, and a desire to grow, is a good fitting school for its teachers. What branches are taught there is of secondary importance.

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4. To build a wall of partition in the normal school or in the college and say that the studies on this side are purely academic and those on that side purely professional is the concentration of stupidity. The most successful normal school is that which most closely combines in its daily work educational thought and educational practice. The attempt to separate them combines the worst elements of a blunder and a crime.

It is a fact that the colleges and normal schools do not realize that it is their province to prepare teachers for high-school work. When they reach this point certain results will follow. They will no longer attempt to prepare teachers for their work by reading and studying a few books during the last half of the course. The science and art of education will be taught during every exercise. There will be no less academic work, but it will be of a very different kind. Each lesson will be taught as based upon educational principles; the student will be required to study it with two ends in view—as he would teach his pupils to study it, and as he himself should study it if he were to teach it. Arithmetic or geography should be just as much a professional study in the normal school as psychology or the history of education. Every exercise should have a schoolroom side.

Of the value of scholarship.—Superintendent Henry Sabin (Iowa): The normal school which makes excellency of scholarship a subordinate aim makes a very grave mistake. On the other hand, the instructor whose only aim is to induce excellence of scholarship has no place whatever in a normal-school faculty.

Superintendent A. P. Marble (Worcester, Mass.): The young can not be well trained by an untaught teacher. It is not merely the prescribed curriculum that the pupil must be made acquainted with. This is the framework, so to speak, the skeleton, upon which must grow the parts that make up a symmetrical whole; and this symmetry is produced out of the well-stored mind of an educated teacher. The daily lessons must be enlivened and vivified by related facts and suggested ideas. This can be best done from the storehouse of a mind running over with knowledge, broad and deep, encompassing the subject-matter of the daily tasks.

To such broad culture the teacher should, if possible, by all means add an acquaintance with the science and the art of teaching. But valuable as this professional training is, it can never take the place of the indispensable qualification just named.

Theory and experience declare for scholarship.—B. A. Hinsdale: Which is better, much scholarship and little method, or little scholarship and much method? The answer to this question can not for a moment be held in doubt. Both theory and experience declare for scholarship. In fact, the enthusiasm of knowledge is a prime requisite of the best teaching. Few school spectacles are more painful than that of a poor teacher eking out slender learning with an excess of method. The good scholar without professional training will commonly stagger a good deal at first, but if he have the root of the matter in him he will soon find his feet; while the teacher of an ill-organized mind and small equipment gives little promise of ever overcoming his limitations. The *what* will catch the *how* long before the *how* will overtake the *what!* And this is why all sound educators plead for the improvement of the intellectual equipment of the teachers of the country.

The function of the normal school.—Edward T. Pierce, principal Chico State normal school (Cal.): The first requisite of good teaching is a thorough knowledge of the subjects taught; the second is an insight into the principles of education and the methods of applying them. If the subject matter is slighted, method is purposeless; and knowledge of methods presuppose an understanding of the subject in the teaching of which the methods are to be applied. Therefore the normal schools of this State must, at present, pursue two lines of work—academic and professional—and should slight neither.

J. W. Dickinson, secretary State Board of Education (Mass.): A normal school may be known from any other institution of learning by the character of the exercises to which it may be properly limited. If it devotes its whole attention to teaching the objects and subjects of knowledge in an academical way it has no claim to a distinct existence. Other schools are doing the same thing. If it teaches the philosophy of teaching and the method founded upon it, and the history of teaching from the earliest times to the present day, it is doing its legitimate work. If, at the same time, it attempts to teach the facts and truths of the various sciences, then it imposes a burden upon itself which circumstances may render necessary to a limited extent, but which should not be allowed to interfere with professional teaching beyond the necessity.

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What may be required of all candidates.—State Superintendent A. S. Draper (New York): In our cities, the number of candidates for teachers' positions is so great, and the facilities for acquiring proficiency so many, that it is perfectly practicable to require that all candidates shall have completed the high school course and spent a year in a normal school or training class before being given authority to teach. We passed such a law in our State last winter. It was vetoed. But we will have it yet. Some of our cities are doing precisely this now without law. All can do it and have plenty of teachers. It is no hardship to young candidates. It will work incalculable advantage to the schools.

How a high school may prepare teachers.—Superintendent Henry Sabin (Iowa): Occasionally we find a high school which is renowned in all the surrounding country for sending out successful teachers. In such a school, if we investigate, we always find certain conditions:

1. Pupils are taught how to study with a view of getting the most out of a subject, not simply out of the book. They practice vivisection on every subject they take up.

2. They are taught to exhaust the means at their command. If it is only a dictionary, an encyclopædia, a few reference books at home or at school, they make the best use possible of them. Superabundance of means is sometimes a source of waste to the student.

3. The pupils are expected to ask questions as well as answer them, and the teachers are expected to answer questions as well as ask them. The independence, which the pupil thus gains, goes with him into his school, and serves him well in the absence of strictly professional training. It enables him to solve, without the aid of a key, the innumerable problems which present themselves almost daily in the schoolroom.

Enthusiasm is the life of good school work. Thus the pupils during four years acquire so great devotion to their work, they become so aglow with the delight of acquiring and imparting knowledge that it becomes an appetite, as it were, and they are not happy except when under its influence.

Of extremely doubtful value.—The best psychology.—H. C. Missimer (Erie, Pa.): The young girls that go into our training classes fresh from the high school are too immature to understand mental philosophy or psychology. It will only befuddle them. The power to analyze, to dissect, to connect mental processes in their proper relations, is the last and highest achievement of the intellect. It is the result of much observation and wide experience. For a young girl to psychologize, to philosophize about the mental process of the child-mind, without knowing anything about children, or coming into actual mental contact with them is, if not the purest nonsense, of extremely doubtful value.

Again, the abstract study of psychology, as a preparation for teaching, is very apt to send the young teacher into the school with a tendency to impose and practice upon the children a theory instead of a disposition to study actual conditions out of which she ought to develop her own theories and her own methods.

Even the discussion of methods, before we are engaged in teaching, is of little value beyond conveying an idea of the nature of the work. The method of somebody else is of no value to me unless it quickens and expands ideas already existing in my own mind.

The best psychology for the teacher—the beginning teacher—is the psychology of vulgar practice. It is the right kind of psychology to rid our minds of foolish, impracticable, and short-sighted notions. It is the psychology that shows us where we shall probably fail, and where to concentrate our energies in order to succeed. Professional psychology should come after the teaching is begun, after common-sense study of the children after the study of actual conditions. Then it will develop, enlarge, and widen the teaching mind.

Special preparation may be exacted even in the country.—Superintendent A. S Draper (New York): We can not expect that all teachers will be as thoroughly prepared for their work as they may and ought to be in the cities. Yet experience shows that some special preparation may be exacted even in the country. Candidates will comply with what is required. Send all you can to the regularly established normal schools, but remember that there can never be enough normal schools maintained to supply all the teachers needed in the common schools, and also that all candidates can not afford to take a complete normal course for the sake of the mere chance of being employed at five or six dollars per week, with the likelihood of being turned out at the next turn of the political wheel. We need short-term training classes throughout the rural districts.

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The use of teachers' examinations.—Superintendent A. S. Draper (New York): It is quite the fashion to discredit examinations. It is a foolish habit. The examination has its legitimate use. We do not use it to determine who shall be certified, but who shall not be. We do not say that all who pass an examination shall be certified by any means. We say that the local officer may withhold certificates from any candidate, no matter whether he passes the examination or not, and without giving any reason. We only say that he shall not issue a certificate unless the candidate attends upon a prescribed course of professional instruction or passes the prescribed examination. In the next world we may be able to accomplish ends without means but we can not in this world. * * *

We will continue to talk about innumerable things, but nothing can be of such supreme importance as the institution of efficient agencies for promoting the professional training of teachers and for preventing the certification of such as are not so trained.

The essential conditions of effective teachers' examinations.—George William Curtis: Teacherships in the schools are not popularly regarded as subjects of patronage. But are they not so practically, and is it wise that they should remain so? What is the present system? I believe that the requirement of certification or license before appointment is universal in all the States of the Union. The examination upon which the certificate or license issues is, then, the cardinal point. What are the vital, essential conditions of effective examination? To be properly effective the examinations must be uniform, entirely competent, and wholly independent of the appointing power. The examiners must be sincerely interested in education, familiar with the duties of a teacher and with the requirements of the art of teaching, and capable of conducting an examination to ascertain both the scholastic attainments and the specific professional fitness of the candidates. Wherever these conditions do not exist, the public school system, and therefore the whole community, suffers.

A reserve corps of teachers—The Milwaukee plan.—Superintendent William E. Anderson, of Milwaukee, Wis.: Some three or four years ago an inquiry into the frequency of teachers' absences, and the average number of substitutes employed to fill such absences, suggested a change whereby a larger number of well-qualified teachers than those assigned to places should be kept at the command of the board. In Milwaukee it was found that of a corps of 400 teachers employed at that time there was an average absence of 12 to 15 teachers a day, the absences some days exceeding 20. This includes all vacant places, permanent and temporary. It frequently happens that two or three vacancies exist for which there is no appointee at hand. It was customary, as in other places, to occupy these by so-called substitute teachers having no certificates, or by those having the certificate, but no experience. A rule was adopted empowering a committee and the superintendent to appoint a number of supernumerary teachers, to be called the reserve corps. These teachers were the best that could be obtained during the summer vacation. Their appointment was regular and their salary the same as that of assistant teachers, no deduction being made when their services were not required, providing they reported for service at the office. Members of the reserve corps have their predilections and aptitudes. These, known to the superintendent, are regarded when temporary assignments are made. A vacancy in a seventh or an eighth grade is supplied by a teacher who is supposed to have the capacity for teaching higher grades. A vacancy in the primary grade is supplied by a teacher who is supposed to be adapted to primary work. In the mean time the members of the reserve corps, being selected upon grounds of general efficiency, experience, and training, are eligible for appointment. Their service in temporary classes commends them for appointment, and their detail to occupy recently created vacancies is a kind of preparation for appointment. If the principal is satisfied, a resolution of transfer from the reserve corps to the corps of the school is all that is required. In this way we have been able to satisfy the prerogative of local commissioners who select their own teachers and with the improvement of the plan hope to introduce a larger number of capable teachers to fill vacancies. As the reserve corps is depleted it is recruited by the committee and the superintendent, whose business it is to keep a record of applicants and to hold frequent meetings for interviewing applicants for admission to the reserve corps. The corps was first organized under rules which prohibited the employment of any teachers who had taught in the schools previously. The restriction was, however, removed, and perhaps not for the best interests of the schools. Experience has shown that some teachers were kept drifting about upon the reserve corps for a

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whole year without finding, in the good opinion of principals and commissioners, a transfer to a permanent place. It is best to discontinue such teachers from the service. Otherwise the reserve corps may become occupied by a class of professional substitutes and become an invalid corps instead of a reserve to supply capable and vigorous recruits. There are many good features and some unexpected drawbacks connected with the plan; but as a plan to enable the school board to establish a standard of professional training, to provide itself with a sufficient number of teachers duly qualified to receive appointment when such teachers are obtainable, it is abundantly successful.

Regardless of the interests of the school.—Superintendent William E. Anderson, Milwaukee, Wis.: The more widely the power of appointment is distributed the greater the weight and influence exercised in behalf of the would-be teacher and regardless of the interests of the school. We are all acquainted with the commissioner who would be good enough to give all persons certificates whose fathers are taxpayers, who look upon the maintenance of schools first of all with reference to the support of teachers, and who sees no farther into the problem of licensing and selecting instructors than what appears to be a charitable mission of giving to as many deserving young women as possible a chance to earn a decent living. The good man who feels that the place should be given to the applicant who comes first, to the girl who has a mother to support, to the graduate of his own school, the daughter of a local politician, or a member of the same church with himself, will always flourish in city school boards. He is frequently a good man for other purposes but hiring teachers, and there is no reason for disqualifying him for exercising that function, when his generous predilections may be rendered harmless by a little wise legislation.

The best way for teachers to acquire control.—J. W. Beeson (in the Educational Exchange, Alabama): There should be a love for children on the part of a teacher. It is a fact, recognized by all good educators of the present day, that the most successful way to govern a child is with love; that when a teacher wins the respect and love of a pupil he has no trouble in controlling or in teaching him. The best way to win this love of children is to love them first. "Love begets love" is a law of human nature. Besides, it seems impossible for one to do the greatest amount of good for those for whom they have no special love.

Guard the teaching force against incompetency.—Superintendent A. S. Draper (New York): I lay down the proposition as true that in nine-tenths of the cities of this country the board of education will be influenced in the appointment of teachers, and will appoint whomever the law and the existing regulations of that city will permit them to appoint as teachers, regardless of the peculiar fitness or adaptability of the applicant for the position. The conditions should be regulated by statute law. You must guard the teaching service against incompetency. I undertake to say that in nine-tenths of the cities of the country you will get a stronger corps of teachers from regulations which provide that only graduates of the city high school or the city normal schools or the training schools are eligible to appointment than you will if you throw the matter open and let the board select and bring in "the new blood," because the board, as a rule, will abuse the opportunity thrown open to them.

How shall he learn these things?—Principal George M. Grant, Queen's College (Ontario): That every future citizen shall be taught to read is much. That he shall be taught to observe and to think is more. But that he should learn to love, admire, and revere that which is worthy, and hate that which is unworthy, is most of all. But how shall the average boy learn these highest things save through the voice, tones, and whole life of his teacher?

Better even than mere learning.—Superintendent A. P. Marble (Worcester, Mass.): Better even than mere learning and professional skill is a sincere love for children and an earnest desire to lift them up. The teacher, filled with love for the little ones, will find a way to help them and improve them, far more than one filled with all knowledge and stuffed to repletion with methods, psychology, and the science of pedagogy, if in attaining all this the juice of human kindness has been squeezed out of her. Children must not be looked upon as specimens upon which to practice the arts of the profession. They are human souls to be developed and made manly and womanly.

Wasting their efforts.—Superintendent Henry Sabin (Iowa): I honestly believe that very many of our teachers are wasting their efforts and failing to do their best work, because they are neglecting to regard the things which pertain to

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the present wants of their schools, in their desire to attain an undefined, intangible, impalpable something, of the nature and use of which they have no definite idea. I wish we had more institute instructors whose instruction is luminous with the light of common things.

The relations between teacher and pupil.—President E. B. Andrews, of Brown University, in School and College: We need, more than we have as yet done, to get upon a level of friendship with our pupils, not standing off from them, not looking down upon them. Present yourself to your pupils as their guide, friend, adviser, elder brother—one who, having the advantage of age and larger study, is able to assist them. The *in loco parentis* idea of the teacher's office is sometimes urged as an argument in favor of pedagogical sternness and severity. Not so. Parental authority itself is no longer exercised in the old way. How many civilized fathers horsewhip their boys nowadays? In the lower grades, and to an extent in all, authority must exist, but it should be kept as much as possible in the background. Never coerce a pupil save as a last resort.

Kindness to pupils is never exercised in vain. Strive by unselfishness and perfect uprightness to make your pupils regard you the finest man on earth. To this end do not assume infallibility, but, if mistaken ever, admit it. Be an original thinker, an authority in your department, no mere expositor of a book; yet if you pretend never to err, your dullest scholar knows better and puts it to your discredit.

Never use sarcasm toward a pupil or make fun of him. You are a coward if you do, taking advantage of position to enable you to hurt a fellow-being as good as yourself, and you will be despised as a coward deserves. But worse, when you treat a pupil so, you can teach him little more. The inclination on that learner's part to question you is gone forever, and has given way to timidity, or perhaps to a sullenness or obstinacy, which you can never overcome.

Until he withers into a machine.—Rev. Smith Baker: A teacher who simply hears children recite will grow less of a man or woman until he withers into a machine, like a circus clown or a magic-lantern lecturer, repeating the same performance; but the living teacher, though he remain in the same humble school for a generation, will, like a tree, grow broader and higher and deeper each year. His teaching will expand his manhood.

What the teacher is imparts itself.—Rev. Smith Baker: Every teacher is a picture. Eyes are following her while she is silently imparting ideas of life. Every teacher should be such a man as we want our boys to be; such a woman as we want our girls to be. No teacher can help being a character builder. What he is imparts itself to others. *The teacher of my boy is doing more for my boy by what he is than by what he says.*

The most powerful lesson.—Superintendent T. F. Wilson (Stillwater, Minn.): Set lessons are of but little value. The most powerful lesson by far is unconsciously given by the teacher whose life is a true type of noble manhood or womanhood. A teacher must live a life above reproach. This alone secures respect. Without respect nothing can be done. Once secure this respect and the frown of dissatisfaction or the smile of approval will cause deeper lessons to sink into a young heart than hours of admonition.

Women as school teachers.—Hon. John L. Buchanan, of Virginia: Among persons liberally educated more women than men find employment as teachers in the public schools. In fact, in a good many States public-school education is already largely in the hands of women teachers, as is shown by late school reports. In some States there is still an excess of male teachers, but it is constantly diminishing. * * * This preponderance in the number of female teachers is easily explained. The avenues of remunerative employment for women are more numerous at the present day than formerly. They are proving themselves faithful and efficient workers in many positions which in former days were thought to be unsuited to them or to which they were thought not adapted. Public sentiment has materially changed touching this matter and more liberal views prevail. But still the sphere of woman is much more restricted than that of the other sex, her range of occupation much more limited. Again, it is almost, if not quite, a universal custom to discriminate against her in the matter of compensation. Why the same service equally well performed should in one case have a different money value from what it has in another is hard to explain on any principle of justice. Yet such is the fact. But woman is the natural guardian of childhood. Her delicate sensibilities, quick perceptions, active sympathies, and unselfish affections peculiarly fit her for training and managing

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children. Hence her success, especially in the primary departments of school work, suffers nothing by comparison with that of the other sex. And in higher departments also, and in positions requiring executive or administrative talent, her work is often at a premium rather than at a discount. Doubtless the best results in education are to be secured under the influence of accomplished teachers of both sexes. As skilled artists, the delicate feminine touch of the one and the vigorous masculine touch of the other are both necessary to give the highest beauty of form and finish to the plastic nature of youth.

The small proportion of male teachers to be deplored.—State Superintendent John W. Dickinson, of Massachusetts: The standard of qualifications for teaching has considerably advanced in ten years, so that the demand for men and women fitted to take important positions far exceed the supply. As a consequence women of experience are now called to positions formerly occupied by men who taught for a brief term to obtain pecuniary aid in preparing for other pursuits. The policy is doubtless as wise in many instances as it is economical, but the small proportion of male teachers is certainly to be deplored.

Why so?—The Chicago Evening Post: Shall a woman of strong character and great ability, who has made a long and honorable record in the public schools of Chicago, be refused promotion because she is a woman?

Why should they not do so?—Educational News: A New York journal publishes it as a fact that the Mercantile Library of New York has but one member who reads educational books, and adds that teachers ask for novels. Well, probably teachers find a better supply of novels in the Mercantile Library than elsewhere. If so, why should they not enjoy them? Probably, also, these same teachers have a supply of pedagogical literature at their homes, and they seek for the lighter and more entertaining reading elsewhere. If so, why should they not do so? The statement might mean much, and it may mean but little. We know of no class of people who would more fully enjoy the classical fiction or even the lighter literature of our language than teachers. Surely the constant strain which they suffer during the working hours of the day entitles them to whatever innocent recreation they can get, even if it be the novels of the Mercantile Library.

The supreme question.—Superintendent Henry Sabin (Iowa): Except only the question of moral training, all other questions sink into insignificance compared with this of supplying the schools in our smaller cities and towns and in our country districts with competent teachers.

The pensioning of teachers recommended.—The following resolution was adopted by the department of superintendence of the National Educational Association at its Philadelphia meeting (February, 1891):

Justice, as well as the best public service, requires the retirement and pensioning of teachers after a service of thirty years and upon carefully devised conditions. We recommend the enactment of laws in the several States to permit and to regulate the retirement and pensioning of professional teachers.

Against pensions.—C. W. Bardeen (Syracuse, N. Y.): Pensions after a certain amount of service will make it only the more difficult to get rid of incompetent teachers who wish to complete that term of service.

Master teachers wanted—How to secure them.—President D. C. Gilman in the Cosmopolitan: The tendency of our times is not toward the fostering of such teachers [as Arnold, Thring, Abbott, Taylor]. Many of the brightest Americans are attracted by business. The three professions traditionally called learned and the modern scientific pursuits enlist great numbers. Of those who devote themselves to teaching the most prefer to enter the service of the college or the university. Few only, so far as my acquaintance goes, seek permanent careers in the service of boys' schools; few declare that they will be satisfied with the opportunities and emoluments of a good and faithful teacher. Hence one of the most delightful of intellectual pursuits, one of the most useful, one of the most honorable, one of the most sacred, is in danger of falling into the hands of inferior men. The only remedy that I can see is for the head masters, trustees, and parents to be on the watch, and when a born teacher appears engage him, reward him, encourage him, retain him. See that his path is free from stones, that he is not overworked or harassed, and that he is kept contented in his lot. Let him be sure that as much respect and as much income will be his as would fall to his portion were he to enter the pulpit or be called to the bar. Let it never be forgotten that the teacher's gifts are as rare as the poet's. The methods of education can make scholars, pedants, specialists, and a very narrow man

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may live in his den and benefit the world by patient observations and minute researches. But no process has been discovered for making teachers. They are like gems, that must be found, for they can not be produced. I would rather place a schoolboy under one "all-round man" whose manners, morals, and intellectual ways were exemplary, and who was capable of teaching him Homer and Euclid, than under a group of specialists selected simply as mathematicians, physicists, and linguists. Later on, when the character of a boy is established, when his habits are formed, when he knows how to study, when he has learned the art of acquiring knowledge and the graces of expression, let the specialists take hold of him. Even then let it be provided that the specialists shall not be too narrow.

XVII.—TEXT-BOOKS.

The valid objection to free text-books.—S. S. Parr: All things considered, free books promise most to our schools. There is but one valid objection to this system, and that is the communistic one. The State undertakes to do what the individual should be left to do for himself. Doubtless, free books would be a long step towards solving the knotty problem of how to more efficiently educate the children of foreign-born parents, who are deterred from the full benefit of the public schools by the cost of books and appliances. They would also solve the questions of cost and economy.

A warning voice from out of the past.—Azariah C. Flagg (State superintendent, New York, in 1830): Great improvements are constantly going on in the character of school books. The greatest experience and much of the best talent of the country are enlisted in this business, and the fruits of their labors are constantly giving them new claims to the approbation of the public. The adoption of a particular book would amount to a prohibition upon all improvements and subject the inhabitants to a loss of the prohibited books on hand. The interests of the common schools may be seriously endangered and can not be essentially benefited by the adoption by law of any book or set of books.

The text-book system of Ontario.—Hon. George W. Ross, minister of education: No text-books can be used in any public or high school of the province until sanctioned by the department. There is now but one text-book in each of the subjects taught in the public schools. In the case of high schools more than one text-book is used in some of the subjects, although the tendency is towards the same limitation as prevails in the public schools. When a text-book ceases, in the opinion of the department, to serve its purpose it is set aside and a more advanced one substituted. The price of the text-book, the quality of the paper, style of binding, typography, etc., are all regulated by the department. Under a statute, boards of trustees may provide free text-books for pupils in cities, towns, and incorporated villages.

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CHAPTER XVI.

EDUCATION ABROAD.

NOTES FROM EUROPEAN EDUCATIONAL PERIODICALS.

Associations.—2. Bibliography.—3. Classic Languages.—4. City School Systems.—5. Compulsory Attendance.—6. Crime.—7. Exhibitions.—8. Hygiene.—9. Illiteracy.—10. Language Study.—11. Libraries for Pupils and for Teachers.—12. Manual Training.—13. Medical Supervision.—14. Miscellaneous.—15. Museums.—16. National School Systems.—17. Pensions.—18. Psychology.—19. Religious and Moral Instruction.—20. Salaries.—21. Secondary Education.—22. Secular Sunday Schools.—23. Special Schools.—24. Superior Education.—25. Teachers.

1.—ASSOCIATIONS.

Denmark.—From the 6th to the 8th of August, 1891, was held the sixth Scandinavian school meeting in Copenhagen. These meetings were at first frequented chiefly by primary teachers, as the topics discussed concerned primary schools solely, and secondary teachers had their separate philologists' meetings; but at the last two meetings there have been also lectures and discussions on subjects concerning secondary schools, the result of which has been a discontinuation of the previous philologists' meetings. The last conference numbered 5,300 visitors, 3,000 of whom were from Denmark, 1,100 from Norway, 1,000 from Sweden, and 200 from Finland. (Allg. D. Lztg.)

Germany.—The German National Teachers' Union had 44,449 members on July 1, 1891. Seventeen local teachers' associations joined the union during the last half year. (Paed. Ztg.)

Saxony.—The "Pedagogical Circle" of the women teachers in Dresden has closed the twenty-sixth year of its existence. The number of its members exceeds 300. The society has listened to several courses of professional lectures, and special courses in botany, French, drawing, and gymnastics that were arranged for the younger members. The society maintains a bureau of information for teachers without positions. It has a sick fund from which during the year 1890 eight members were supported for several weeks and even months. (Die Lehrerin.)

Prussia.—The pastoral letter of the bishop of Ermland (province of Prussia), in which he objects to independent teachers' associations, has had quite the contrary effect to what he aimed at. The teachers are clubbing together more than ever before. In resolutions couched in respectful terms, they say that while they shall never be found wanting in respect for the clergy, they energetically protest against ecclesiastical interference, and all inroads made into their natural and political rights. (Allg. D. Lztg.)

France.—The first timid attempts at holding national teachers' meetings in France for the purpose of discussing professional affairs date back to the year 1840; they were kept up for ten years, and then ceased, until revived in 1871. Not until that year did these meetings show a firm organization, adapted to promote the successful exchange of professional ideas and practical coöperation. The example of other states was decisive. The great educational meetings in Germany, Belgium, and Switzerland induced the French teachers to attempt similar meetings, and they were well and readily supported by the centralized state authority.

The first large teachers' meeting was held in 1878 in Paris. Though the elementary or common school claimed the lion's share of attention, it did not occupy the meeting exclusively. The elementary school did not then have the

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excellent organization which to-day we have reason to admire; on the other hand, owing to several important events, political personages had to be drawn into the proceedings, persons who carried the discussions into the domain of higher education. Here, naturally, principles of pedagogy and general educational questions claimed the attention. The claim to an equal education for all citizens was urged. Upon this basis it was thought the endeavor to combine the different branches of instruction, as well as the different kinds of schools, might be successful. The result of this discussion was the adoption of ideas indicating fundamental reforms, according to which education was to be conducted "with motives of justice, freedom, and love for the young." Besides these questions, others relating to gratuitous, obligatory, and secular instruction were discussed.

As the work which had been laid out for this congress could not well be finished within the prescribed limit of time, another session was held in Paris in the year 1879, in which questions were discussed touching the protection of children, freedom of instruction, moral education, and instruction in civics, also concerning the teaching of language, drawing, and manual labor.

Although it can not be denied that the members of this congress were actuated by a great love for the cause of youth, one is on the other hand obliged to admit that their demands were pushed rather too far. They put in the claim that every school should possess a workshop, a garden, a library, a museum, and a laboratory; also a panorama of history and geography, and a hall for musical and other entertainments. They further insist that the site of the school buildings should be as attractive as possible, and that the buildings should have a handsome exterior. All these demands were naturally shipwrecked on the rock expense, especially as instruction was gratuitous; however, the congress had this good result: that public attention was directed towards the school question, and the school officers and functionaries spurred to renewed activity in this department, in which so much remained to be done. The school authorities henceforth gave much closer and more constant attention to the subject of instruction in manual labor, since they recognized how very important to a comprehensive education is the early training of hand, eye, and taste.

The next congress, which also held two sessions in Paris in the years 1880 and 1881, owed its existence to private initiative exclusively. It met to give expression to the wishes of the friends of education in France and other countries, who were joined by a small number of French public school teachers. The idea of educational congresses periodically meeting had not taken root very deeply among teachers of the public schools, and yet it was necessary to make teachers of the primary schools acquainted with important educational questions and to afford them an opportunity for exchange of opinions. Moreover, there were brought to discussion in parliament, owing to the interposition of the minister of instruction, Jules Ferry, legislative questions relating to school matters, the solution of which was anxiously looked for in every direction. The French Government, particularly at that time, voluntarily favored the wishes and endeavors of teachers.

Formerly, the national administration of education had been satisfied with assembling certain teachers to hold a sort of professional conference in which the wishes and projects of the government were submitted and discussed. But now the administration frequently called together conventions of teachers; their opinions were asked, and they were invited to propose principles and methods for the better regulation of instruction; but the administrative officers held themselves far aloof from all direct influences of teachers. This mode of procedure is still in vogue at the present time, and although the learned and far-famed M. Gréard, vice-rector of the Paris Academy and as such the representative of the government, constantly appears as the chairman of the teachers' convention in France, this surely is not done with the idea of winning the teachers over to the views of the government, or to allure them into the government's camp. The honorable character of the great savant is a sufficient guaranty against all that. The respect which is so universally manifested toward his experience and his stately presence, excludes anything like underhanded actions. He endeavors most strenuously to exclude every personal matter from the debates, and to insure free discussion to all. His work consists chiefly in devoting his ripe experience and his talents to the service of the good cause. He only takes part in debates in order, as he himself once remarked, "to obtain result (by means of votes) which may be recognized as the expression of the common views of those present."

Animated by this truly liberal-minded spirit the congresses met in the years

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1880 and 1881, but their work not being finished, it was resolved to hold a third congress in the following year.

The first assembly united the male and female principals of the normal schools and a number of public school inspectors. The second consisted of the public school teachers, whilst the third saw in its midst the faculties of all the normal schools and the practice departments connected with them.

The questions discussed were as follows:

In the year 1880:

1. The educational organization of ungraded public schools.
2. The methods of obtaining a better preparation of students for the normal schools.

In the year 1881:

1. Means for improvement of school attendance.
2. Instruction and education in the lower grades of public schools.

In the year 1883:

1. What are the experiences that have been made up to this time with the newly organized normal schools in regard to teaching force, supervision, and dormitories?
2. What difficulties are encountered in carrying out the new courses of study, especially in regard to psychology and morals?
3. Organization of practice schools and their extension.
4. Questions concerning the service which a normal school can render the teachers of the province.

All these questions were discussed in a practical and definite manner; most of them had already been considered in the assemblies of the cantons and departments. After the congress had disbanded, its proceedings were given to the public on the part of the ministry. Cours Pédagogiques de 1881 et 1883 (Paris, Imprimerie Nationale).

The reproach has been cast upon this congress that it was entirely official; but although we recognize the importance of conventions perfectly independent and free from any official interference, yet, on the other hand, we must also admit that a liberal ministry not disinclined to reform will surely avoid everything that might arouse a suspicion of partiality. Judging by the spirit which characterizes the French educational administration, it can not be doubted that its aim was and is merely to learn the views of its most important fellow-workers in the great cause of education, and these most assuredly are the teachers. It invites them to conferences, follows their labors, tests their results, and carries out their plans as far as it is practicable. Although financial difficulties often frustrate the good intention of the French Government, we must for that reason not think that the government in its coöperation with superiors and subordinates fails to see the best solution of the difficult educational problems.

Thus, then, the first step toward inaugurating large teachers' meetings was made. Those who participated in the congress returned to their homes with the consciousness of having fulfilled their duty, but also with the wish that they might soon again take part in such an assembly; for they had the satisfaction of seeing that Parliament and school authorities hastened to embrace in legislative bills some of the requests which had been brought up in the congress. It was not long before the next great convention was held. It took place in the city of Havre, in the year 1885.

Havre had always been noted for her friendliness to the schools, as well as her excellent school institutions. Her public and business schools are considered the best in the whole country; her school buildings, as far as elegance and stately architecture are concerned, are unequaled in France. The city from time to time sends teachers to foreign countries in order that they may learn other systems of education, and it was first in Havre where a "Society for Objective Instruction" displayed in schools and societies by means of lantern slides the most important discussions of modern times, the miracles of nature and industry, in a manner suited to the ordinary understanding.

The suggestion to hold an International Congress of Teachers was made by the mayor of the city, M. Jules Siegfried. In his resolution relating to this measure, he emphasized the importance of congresses in all the departments and especially in that of education, because it was only in this way that valuable and tried improvements could find entrance. All partake of the benefit derived from them, teachers, pupils, families, and the country itself. The resolution was adopted, and a committee composed of representatives of the teaching profession and of the state officials was intrusted with the preparatory work. The assembly was to take place at the end of September, and at the beginning of August

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twenty-five hundred persons had signified their willingness to participate. M. Gréard was asked to occupy the chair at the opening of the congress, which was to be divided into three sections; the minister of instruction had also promised to be present at the opening.

The assembly, which was well attended, was principally occupied with the consideration of four questions, to wit: (1) The benefit derived from national and international educational congresses; (2) instruction in manual labor in the public schools, and organization of schools for mechanics; (3) teachers' salaries in different countries; in what proportion should state and community contribute to the salaries of teachers? (4) the question of practical preparation of candidates for the position of teachers in the normal schools.

The discussions of the third question excited the greatest degree of interest, because the law of the 16th of January, 1781, relating to gratuitous instruction in the public schools afforded some natural advantages to the older teachers, but contained some rather unfavorable passages for the younger men. A rectification of this matter was demanded as far as the finances would permit. The demands of the assembly on this point were comprised in these, which were submitted to the government. The second and fourth numbers of the programme were also thoroughly considered; and again, a renewed interest was manifested in the question of manual training, the plan of which had been determined by the law of December 11, 1880, and by that of March 23, 1882. This subject, which, like no other one, is in need of the warm advocacy of inspired enthusiasts and requires as low penetration into the consciousness of the people at large, was also brought up before the international congress of the year 1889; yet even *now* it has not been settled in an entirely satisfactory manner, though all are convinced of the importance of this discipline in the educational work of the public schools, and would not agree to abandon it as a branch of instruction?

The question of the benefits of national and international congresses naturally could not be disposed of in one session; the discussion therefore ensued as to the intervals after which such conventions should be held; what persons should be invited as deputies, and what means should be employed for defraying the expenses. It was proposed to elect a permanent committee from the assembled delegates for the purpose of organizing congresses; but the idea was dropped at the request of the minister of education, who had himself expressed his willingness to convene such an assembly in case of necessity.

Mention should here be made of another, namely, the international, technical, commercial, and industrial congress, held in Bordeaux in 1886, which fell between the international congress of Havre and that of Paris in 1887, and enjoyed the patronage of the ministers of commerce and instruction and other high officials. The first subjects brought up were those relating to technical and commercial instruction; the next under consideration was that of the means of promoting the interests of the merchants and tradesmen of the future through public school instruction.

The Congress of Havre had expressed a strong desire to hold a similar congress in Paris in 1887. A journal entitled "Les Congrés Instituteurs" had been started in 1885, which had assumed the task of preparing the way for the Congress of Paris. The first appearance of this journal, issued by an educational society, at once opened the campaign for the idea suggested in Havre of forming a central union composed of the entire body of teachers in France. This journal desired to assemble a congress independently, although it was well-known that the minister had expressed his willingness to act in the matter. The result of the numerous meetings which were held for the purpose of preparing a national congress, was the unanimous adoption of the following resolutions:

First. A friendly league should be formed of all the teachers in each department. These unions collectively, are to form the "Union of Teachers of France,"

Second. The delegates, and all taking part in the congress of 1887, were to take upon themselves the organization of these unions. Third. The "union of the teachers of France" shall endeavor the establishment of permanent international educational congresses.

The most determined adversary of the project of a permanent congress was the minister of education at that time, M. Spuller. In a circular of September 27, 1887, addressed to the prefects, he announced his firm intention to oppose this idea, and also any confederation designed to carry it out. In his opinion the congress would not subserve the purposes of progressive thought, or afford a place for the free interchange of opinions, but would degenerate into a mere wrestling place of passions and a scene of disorder. The circular met with the most violent resistance. The teachers were of the opinion that as they were in

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no sense state officials the rights to protect themselves against all political interference should at all times be permitted them.

It may easily be imagined that this delicate matter was broached at the Congress of Paris, yet, as the element of prudence was a prominent one, very little time was devoted to it. Besides, the work before the congress was of such a a serious nature as to absorb all the time and attention of the delegates. The work was divided into five sections, viz, pedagogy, professional interests, provision for old age, the organization of congress, and gratuitous instruction. As the greater part of the questions had been prepared at former discussions the congressional debates could be essentially shortened. The questions submitted to debate were those that occupied the teachers all over France, and their selection had been made by preliminary inquiries, so that from the beginning these topics met the approval of the majority.

The next and latest international congress in the interest of common-school affairs was held, opportunely, during the Paris Exposition of 1889. It was the result of efforts of the earlier educational congresses, and took the shape of an earnest manifestation of sympathy on the part of foreigners for the aspirations of the promoters of the educational system of France. The resolutions of this congress are still well remembered by all. (After L. Fleischer, Vienna.)

2.—BIBLIOGRAPHY.

Book production.—The London publishers' circular presents the following analysis of the business done by the publishing trade in England during 1889:

Divisions.	1888.		1889.	
	New books.	New editions.	New books.	New editions.
Theology, sermons, biblical, etc	748	164	630	184
Educational, classical, and philological	630	149	557	124
Juvenile works and tales	357	113	418	93
Novels, tales and other fiction	929	385	1,040	364
Law, jurisprudence, etc	115	57	66	40
Political and social economy, trade and commerce	111	24	110	16
Arts, science, and illustrated works	184	69	112	34
Voyages, travels, geographical research	224	73	203	57
History, biography, etc	377	109	310	114
Poetry and the drama	163	68	133	54
Year books and serials in volumes	324	3	342	4
Medicine, surgery, etc	126	73	133	49
Belles-lettres, essays, monographs, etc	165	224	157	183
Miscellaneous, including pamphlets, not sermons	507	120	483	107
Total	4,960	1,631	4,694	1,373
		4,960		4,964
Total new books and editions		6,591		6,057

In looking over the analytical table of books published during 1889, which was printed on the last day of that year, an exceptional literary activity was revealed. The figures for 1889 are not quite so large, but still they mark a production of between three and four hundred books more than were counted up and classified in 1888. In other words, the statistics go to show that the year 1889 has produced about one work per diem, Sundays included, more than the output of 1888. Comparing or contrasting the number of publications in 1889 with those of 1888, we find in theology a slight decline, both in new books and new editions. In educational works, also, 1889 has fewer works to show than its predecessor. Books for young people, on the other hand, show a good increase. Of novels and stories there are noted no less than 1,040 new books, besides 364 new editions. This gives the ardent novel-reader as many as three novels for each week day, with a balance to spare, and one new edition for every day.

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Germany.—The following table of new publications is from the Berliner Börsenblatt:

	1889.	1890.		1889.	1890.
Collected works, History of Literary Bibliography	482	519	Mathematics, astronomy	228	215
Theology	1,582	1,763	Military, hippology	525	569
Law, politics, statistics, etc	1,594	1,638	Commerce and manufactures	840	929
Medicine, veterinary	1,248	1,353	Building, machines, railways, mining, etc	383	446
Natural history, chemistry, pharmacy	852	909	Forestry and sports	109	100
Philosophy	188	152	Domestic economy, farming, horticulture	430	464
Education, school books, etc	2,111	2,132	Belles-lettres	1,715	1,831
Juvenile works	591	521	Fine art, shorthand	766	787
Classical and Oriental, archæological, mythological	644	626	Folk-lore, almanacs	723	796
Modern language; old German literature	591	602	Freemasonry	22	19
History, biography, memoirs	892	874	Miscellaneous	556	621
Geography, travel	534	600	Maps	421	509
			Total	17,986	18,875

It is significant that the book production in Germany since 1886 has been steadily increasing, and that the increase is altogether in the direction of the more solid branches of literature, as theology, law, medicine, and natural history. In fiction the advance is almost imperceptible, the increase in the whole department of socalled Schöne literatur (Romane, Gedichte, Theater, etc.) being but sixteen new works.

3.—Classic Languages.

Germany.—In Germany, during late years, the conflict between the gymnasia (classical high schools) and the realschulen (modern high schools) became heated, because all petitions for admission of realschulen graduates to the university were refused by the Government and the university faculties. This is a vital point if we consider that the *conditio sine qua non* of a professional man (no one speaks of women in this connection in Germany) is to have gone through the classical high school, *i. e.*, to have spent in the study of Latin and Greek respectively nine and six years. People that opined that one may become, if not a philologist and theologist, at least a physician or scientist and lawyer, without the knowledge of Greek, laid more stress on modern languages and insisted upon a combination of gymnasia and realschulen under the name of real-gymnasia. This kind of school was a hybrid which could not expect to live long, considering the capacity of the juvenile brain. The real-gymnasium endeavored to combine the advantages of the classical and modern high schools, and, of course, overburdened the pupils.

For twenty years the authorities permitted the problem to stand unsolved. Almost unbearable hardships resulted from the fact that the curricula of the high schools were inflexible, non-elastic, cast-iron. Ambitious parents of small means made heroic efforts at securing for their sons a better future than thought possible in modest occupations, such as trades and commerce. When the boys failed during their protracted course of professional training (*i. e.*, three years in preparatory classes, nine years in the classical high school, and four years in the university), their future was blighted; being "studied men" they were considered "spoiled" for trades and commerce, and thought themselves too good for manual work. Hence they joined the army of malcontents. Every kind of high school in Germany has special aims in view, hence shapes its course and modes of training accordingly. That a school, and even a college, should be what it is in England and America, a school of general culture, and not a place in which to obtain an education *ad hoc*, was vigorously preached by Dr. Wichard Lange, Dr. O. Frick, and many others. The educational press devoted much space to plans for a simplifications of curricula and a unification of schools. The literature of Germany on the subject of secondary schools, especially the "Einheitschule" (common school) is quite copious, but the reform made little if any progress.

Conservatism embodied in the highest school authorities of the leading states of Germany adhered to time-honored customs, until recently Emperor Wilhelm II, who has himself been a pupil of a gymnasium, and is fully aware of the un-

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bearable conditions arising from the attempts at education *ad hoc*, and chiefly prompted by his desire to counteract the socialistic tendencies (centrifugal, destructive tendencies, as he calls them) of the present time, took the initiative in his capacity as King of Prussia, and called together a number of well-reputed educators, journalists, scientists, legislators, and representatives of the church for a special inquiry into the conditions of secondary instruction in his kingdom. This commission held its sessions from December 4 till December 17, 1890, in Berlin, and formulated a number of propositions for reform of higher education, among which are some that materialize a portion of the hopes of the advocates of "Einheitschulen."

In future, this commission decided, only two kinds of the sample card of secondary schools now existing shall be preserved: The *Gymnasium* and the *realschule;* that is, the classical and modern high school. The former is to prepare for entrance into the university where the learned professions are recruited; the latter to prepare for polytechnicums, for administrative officers, for commerce, agricultural, and technical colleges, etc. The hybrid form, "realgymnasia," is to be abandoned, all other secondary schools shall in due course of time conform with either of the kinds mentioned. Instead of a uniform, a dual system is advocated, not an "einheitschule," but a "zweiheitschule." Where not enough pupils are found in a small town to construct the entire nine years' course, the upper grades of the high schools of several towns are to be combined in one school in the most centrally located town. But in order to enable these two kinds of high school to follow their course undisturbed, it is thought best to give each its own preparatory classes. This latter measure makes illusory the efforts at unifying or fusing at least the lower classes, and the fiat has gone forth to establish a gulf between those who have means, inclination, or ambition to obtain a higher education and those who have not.

While the work performed by the commission may be said to be a step in the right direction, it does not seem in harmony with the democratic tendencies of the age, since it still necessitates an early decision on the part of the parents as to what the boy (mark the word boy, for the girls are not considered in this connection) is to become. It reëstablishes the predestination theory as it were, especially so, because a common substructure for both kinds of high school in form of a common preparatory department is rejected. When we see that the French Republic, with true insight into the best means for its perpetuation, establishes a common school which terminates in a high school and brings the lycées into organic connection with elementary schools; when we see the same organization adopted in the Swiss Republic we conclude that Germany will have a common school ("einheitschule") as soon as it becomes a republic, and not until then. [R. K., in Ed. Review.]

Switzerland.—The pastoral conference of the Canton Granbuenden, Switzerland, recently expressed its views concerning the teaching of the classic languages by adopting the following series of theses presented by Rev. Truog:

(1) Latin has become the language of learned men through school, asceticism, and humanism; but since the natural sciences have made their astonishing upward start the classic languages as a study have lost their position. Despite of that they have remained, or rather were kept the leading study in high schools, because they were, or their acquisition was, thought of peculiar pedagogical value.

(2) But the pedagogical value of (particularly) Roman classics is, as far as their contents are concerned, questionable. For the purpose of formative training of the mind, other branches of study are much better suited: moreover their acquisition will aim at general culture, a thing that can not be said of the contents of Latin authors.

(3) For theologians a certain limited quantity of Latin and Greek, however, seems an indispensable thing on account of the necessity of referring to original texts. The same may be true of other learned professions. But while we grant that a knowledge of Greek and Latin is desirable it would seem as though "less would be more"—that is to say, the knowledge referred to could be acquired during the last two years of the course.

(4) If, however, we can not do without the classics we might introduce them in translations. All church authorities who have written in Latin have been translated admirably, and there seems to be no urgent necessity for the physicians and lawyers either to surround themselves with a high wall of Latin.

(5) It is in our opinion best to replace Latin and Greek in the lower grades of secondary schools by other branches of study, such as stand in close relation to the urgent demands of modern life.

(6) Every high-school course should be so arranged as to offer during the first

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two-thirds of the course a general culture desirable for everybody, and only during the last third of the course the demands of the learned professions should be heeded by offering Latin and Greek. (It must be borne in mind that European high schools have a six to eight, or even nine years' course, beginning with 9 or 10 years, and terminating rarely before the nineteenth year of age.)

(7) If the school is thus designed it will be able to do more for citizenship by teaching history better; more for man himself by teaching hygiene and physiology; more for the business career of thousands of young men by teaching commercial geography, bookkeeping, and modern languages; more for literary culture by teaching the literature of modern times, and more for the prosperity of the country by teaching physics, chemistry, mathematics, and engineering more thoroughly than heretofore; finally, something might be done in the way of technical and industrial training. But as long as the classics claim time and energy of teachers and students, we rear generation after generation of discontented men who can not find a place in this busy life of modern times.

We refrain from all reflections, and leave the thinking reader to rhyme these theses with his own views. Many will find it hard work; others will chime in readily. At any rate, there is no half way shilly-shallying about these theologians. And a decided view, be it right or wrong, is better than no view at all; hence the expressions couched in the foregoing seven paragraphs have a peculiarly refreshing flavor. (Schweitzer-Schularchiv.)

VIEWS CONCERNING THE PEDAGOGICAL VALUE OF LATIN AND GREEK—A SYMPOSIUM.[1]

Since this subject is still a point of pedagogical controversy, a few recent utterances of noted men may be quoted. (Editor "Paed.")

I. *Johann von Asboth.* (Proceedings of the Hungarian Parliament, Budapest, 1890.)

"If it is the policy of the State to eliminate the study of Greek, if it excludes the antique world from the secondary schools, that is from general national education, it robs the nation of that which can not be replaced. From that moment, especially since the religious ideas of the people are already shaken, a generation will arise that has no contact with the past; a society in which people will think it useless to know where their grandfathers are buried, and still more useless to know what they lived and died for. A generation will spring up which from its lofty summit of enlightenment will look down with derision upon its ancestor's piety and prejudices; it will, with strict logic, come to the conclusion, sooner or later, that reverence for parents has a practical justification only so long as the parents may be immediately useful to us. A generation will grow up indifferent to the past, indifferent also to the future, knowing no other interests than enjoyment, comfort, and tangible gain.

"And when this American view of things, this extreme of Western spirit, meets with the spirit of the East; when this Western longing for enjoyment and profit is not coupled with the feverish activity of the West, when Oriental indolence is not coupled with Oriental temperance and want of pretension, but when the longing for pleasure and gain meets with Oriental indolence and want of habits of industry—as they do with us, alas, so frequently—then this match will result in a degenerate and ever-sinking society, under whose guidance we shall become a depraved race, but never a nation.

"The proud-spirited Hungarian nation can not, in its present numerical relation to others, be satisfied with playing a subordinate rôle. My opinion is that it will be one of the most fatal errors to nurse the illusion that we, with our numerical strength in this portion of Europe, surrounded as we are geographically and ethnographically, could be able to maintain a state of the second or third rank—a state that need not trouble itself about others, and about which others would not trouble themselves. Such a so-called neutral middle state has never been able to be preserved in the southeast of Europe. The Hungarian nation will either occupy a prominent position in the empire which it supports (and that was the policy of the Arpades, the Anjous and the Hunyadys, and I venture to say was the fundamental principle of Francis Deák's policy), or it will be nothing but an oppressed and degenerate nationality. An intellectual prominence, or the most energetic exertion toward reaching it, is that with which we supplement our unfavorable numerical proportion.

"With this mission it in no way accords that we should eliminate from our national education those studies in which intellectual prominence is represented;

[1] Translated from "Paedagogium" (Vienna).

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studies which give knowledge of the human heart and soul, and teach how to guide and govern the human being.

"We need not depreciate our own time. This era has its admirable acquisitions, its marvelous inventions which revolutionize material existence from day to day, and on account of its feverish activity this era is worthily called great. But it is obvious that the era of electricity, lightning trains, nerve-killing telephone, etc., can not be the time of intellectual concentration. It can not be a time of harmonious contemplation of men and the world. The antique world, with its simpler conditions of life, its incomparably fewer complications, was much more able than we to view the human being from a human standpoint. That is the reason why the sources of wisdom, of law, and art, are found in Greek culture, compared with which the Latin is only an imitation, a second-hand civilization. From these sources is fed, even to this day, our own material development; for, though we have acquired much new knowledge and are acquiring it daily, we can scarcely say that we are acquiring new ideas.

"Through this mental concentration history, legislation, and art of the ancients became instructive and sublime: through it the knowledge of the human heart and soul became profound and true. But all that can be acquired only in youth; that is, before life's combat robs us of the faculty to receive deep impressions and prevents mental concentration. Afterward, when greater maturity comes with its fever of passion and hot blood, the battle for subsistence opens, and the everyday humdrum business, the prose of debit and credit, overtakes us—then it is too late to acquire all that; and he who would endeavor to do so at that age could acquire it only with very much greater trouble, exertion, and loss of time, or by means of pale-complexioned and insufficient translations.

"It is a demoralizing argument, one that undermines the national ambition of youth, that we should throw out these studies to which all nations cling, great and insignificant alike, only because the mental exertion is too great for us Hungarians. That would not be a proclamation indicating intellectual superiority, but inferiority; it would be an abdication of the mission to guide other nations, and, indeed, an abdication of the place Hungary has in the galaxy of nations."

II. From a recent debate in the Norwegian Storthing (lower house of parliament).

Prof. Horst (of Tromsö): "The classical high school of to-day can not be regarded as a school of general culture. It may seem curious how a man who is himself a philologist, and who from early youth has been brought up entirely in the atmosphere of classical study; furthermore, one who has honestly endeavored to enter deeper into antiquity, how such a man can occupy a standpoint such as I do to-day. But I wish to remark that twenty years of teaching the classics has brought it about that I arrive at the conclusion mentioned before. I have also had ample opportunity to notice how little classic culture is serviceable in life. By the term 'general culture' we understand such branches which are necessary for life, and Latin and Greek are in this regard not any more essential than other branches, unless it be for such persons whose intention it is to spend their lives in studies of a similar kind. As far as Greek is concerned, too little of it is read to learn the language, and too much in comparison with the waste of time it necessitates." The speaker said he could scarcely find words strong enough to express the usefulness of the study of Greek. And yet he did not intend to abolish the study of the dead languages at once; "that would be a revolution, and in matters of school one should proceed with the spirit of reform, not in a revolutionary manner." Hence he suggested to do away with Greek in order to make a beginning with reform. "Nonprofessional men will be astonished not a little if I tell them that this opinion is generally shared by the younger philologists. I was struck with the fact that wherever I discussed this question with younger colleagues I found ready assent. You will find this to be the case all over the country and in small towns. What the weight of opinion is in the capital I have had no means of ascertaining as yet."

Prof. Koht (of Skien) said: "I, too, have arrived at a similar conclusion in consequence of my occupation in school. Classical study does not give what those need who from the threshold of school enter practical life. Development proceeds with inexorable logic, and it can not be prevented; that it will eventually exclude what is commonly called classical culture. What we need are schools of culture which are active in the service of the present time, not in the service of the past."

Rev. Weelsen pleaded for the abolishment of both Latin and Greek, saying: "Latin has no place in a school for general culture. It must be reserved for the university, and there taken up by those who need it for their professional studies. There is absolutely no reason why this language should be kept in the second-

ary schools. Its literature is antiquated and, according to my opinion, not only not beneficial but even dangerous under certain conditions. The importance ascribed to it in formative culture may be found in other branches. I believe that Latin as a requisite component of our higher education is a thing of the past."

Jacob Sverdrup (minister of education) also was of the opinion that the way to general higher culture for the majority in the future would be through the elements of modern education. According to his opinion there is no sense in abolishing Greek only. "Why put the ax to the root of the Greek tree and not to that of the Latin also? A common high school with a strong Latin tendency, that I consider a step backward." As a common foundation for higher education the speaker thought he would propose the native language, in connection with history. However, he did not think the time had come to suddenly dispense, scornfully, with classical education.

Ullmann: "I am thoroughly convinced that the only correct thing is to make a beginning; to abolish Greek entirely and to retain Latin as an optional study; that inevitably Latin will drop out of the foundation of higher education in the future and be only a secondary study for those who for practical reasons require a Latin vocabulary, for at present this is all the majority of persons need of Latin.

"If they know enough to understand a little about prescriptions and apothecary Latin and a few Latin proverbs it is really about all that the majority of persons have retained of Latin at the present day, unless one is a scholar and a specialist. In the treatment of this matter one constantly meets with the peculiar fact that the advocates of the classical languages constantly confound the subject of which they treat with the object in view. People talk as though to abolish Latin would be leading the people back into the times of barbarism. They are mistaken. To do away with Latin would not be detrimental to education. Latin is spoken of as if it were a great educational medium, and it is a mistake to imagine that this special study possesses such an importance, while, on the contrary, there are other studies from which more profit can be derived during the same length of time.

"It is a great misapprehension that it is really Latin which produces philanthropists, and should lead to human culture. For one may know Latin and still be a thoroughly brutal nature. But that which human education does give is the ability to participate in the great thoughts of culture and civilization of mankind; but one can not do that through Latin as the only means. On account of the study of Latin many other studies must be set aside that are most prolific sources of culture. I say this because I have heard rumors that possibly a direct proposition is to be made to adopt new school regulations—namely, such as are based upon the order that Latin be optional without exception.

"To such a motion I, for my part, shall give my consent with great pleasure, for I must admit that owing to the small remainder of philological conscience, which has nearly been ground up in the mill of my examinations, if there is anything unprofitable and foolish in the world for us Germanic people to do it is, above all things, the study of Latin. There is nothing gained by it, but a certain formal education which can be acquired as well through other studies, while in the mean time life and reality derive no benefit from this study."

Hertzberg (from Christiania, a former minister of education, a theologian): "So far as the two gentlemen are concerned who, as professors, occupy such important positions in our high schools, I must admit that their utterances have surprised me not a little. They are both, to my knowledge, men who not only work with zeal in the interests of the high schools, and especially as teachers of the classical languages, but they also understand how to awaken interest for these studies in their pupils. They must either fail to comprehend themselves, or they are in a very unenviable position, having to perform a task the value and importance of which they doubt. In opposition to this point of view, allow me to say, that I believe that classical education has withstood many a test and storm, much stronger and severer than that of to-day, and I trust that, also, in the future it will go through ordeals without being injured. Classical study has taken such firm root in the general European culture, that it has become a member of it, so to speak. And it will not do to pretend that this classical education is something antiquated.

"No, classical education can not become antiquated, it can not die, for it has grown up with the history of man from its infancy. The classical languages mark the way to learning that the generations must take, if they strive to reach the height of the culture of to-day, in case they do not wish to exclude them-

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selves from this great work of general education that is now in progress in all civilized countries. Permit me to draw your attention especially to the importance of classical studies for our church. In case Greek should be omitted from our high schools, preparatory to the university, or in case it be postponed until the university years, I fear that this will give a mortal blow to the Protestant Church."

Ullmann: "When the delegate from Christiania, Mr. Hertzberg, tells us that classical education had stood many tests and weathered many a storm, and will continue to do so, I deny most positively the supposition from which he proceeds. Classical education has not withstood a single blow. All the assaults that have been made on this education have only caused philologists to open the door to the demands of the times, in that they have admitted first one and then another of the modern branches, and have given them a place by the side of their much-beloved Latin and Greek. They have done this with continual warfare and constant fear that they would lose their Latin and Greek, because mankind has become so godless that it wishes for other things than to wander in Ciceronian fields. No, classical education has stood no tests and warded off no assaults, but it has understood how to accommodate itself, and in this respect it has been very clever. It has filled the course with such a number of branches, beside Latin and Greek, that it succeeded in meeting the most pressing needs and demands, and hence we have obtained an organization which suffers from a multitude of studies. Never were the schools so crowded with studies as now. This condition is ample proof of the fact that classical education is 'piping on the last hole.' What remains to be done is to give a last decisive blow, so that the latest modern changes become the dominant influences. The modern branches have found their way into school, and now they are there by right and to be extended, while the classic branches become subordinate; their final elimination is only a question of time."

III. *Dr. Karl Walcker* (in Politik der constitutionellen Staaten. Karlsruhe, Germany, 1890):

"The Greeks were at least as much indebted to Oriental culture as we are to the Græco-Roman, but it did not occur to them to require of every gentleman (*καλὸς καὶ ἀγαθός*) the knowledge of Oriental languages. Many portions of the Old Testament are more beautiful and important than all Græco-Roman classics taken together; but for this reason the students of gymnasia are not compelled to learn the Hebrew language (excepting, perhaps, future theologians). Furthermore, one must not forget what all European nations owe to the ancients, including the Egyptians, the Hindoostanees, and especially the Assyrians. Shall our students for this reason learn Egyptian, Sanscrit, and Assyrian? It is worthy of notice that a philological professional man of conservative political tendency, the celebrated national economist, W. Roscher, justly asserts that one may become acquainted with the classics through good translations in the same manner in which most learned and educated men know the Bible from Luther's translation. Even future theologians, philosophers, nonclassical philologists, jurists, national economists, and physicians need not pursue the ancient languages in the way in which professors of secondary schools pursue them. Latin and Greek compositions are not necessary for them.

"Latin has long ceased to be the international language of the learned. For international intercourse, at the present day, English and French are used. The Berlin Labor Congress in the spring of 1890, for example, held its discussions in French. As far as I can see, future Christian theologians and scholars in Hebrew will never make Hebrew compositions. It would be absurd to assert that a country parson needs no English; that the Assyrian researches of the Englishmen and Anglo-American works and periodicals have no interest for him. Every intelligent person, generally speaking, must understand at least as much English as German students of gymnasia on an average understand French. It is to be regretted that English is not an obligatory study in gymnasia. In consequence of this 95 to 99 per cent of German students of law and national economy, prepared in classical gymnasia, understand no English. They make blunders in the pronunciation of the most ordinary words, and can not translate even the shortest, easiest English sentences. For philologists, national economists, jurists, naturalists, etc., the knowledge of English is indispensable."

IV. *Professor Dr. Herman Cohn* (Breslau, Germany) in Die Schule der Zukunft, Hamburg, 1890:

"That the ancient languages will claim much less time in the future than at present is quite certain. In the Middle Ages Latin and Greek were quite in place; to-day their details have become quite superfluous. It has been calculated that students of gymnasia spend 4,086 hours in the schools in the study of

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Latin and Greek alone, not including work done at home. The student of medicine, on the contrary, spends only 2,160 hours for his preparation, even when he attends the clinics four hours every day for five semesters. And what has the student gained by his 4,036 hours? He knows bad Latin, which with genuine joy he strives to forget, and he knows less Greek, which he succeeds in forgetting without effort.

"The grammatocrats, as Prof. Esmarch so beautifully calls them, of course maintain that the grammatical exercises are mental gymnastics. I do not believe, however, that anyone can prove that the mental gymnastics are stronger when the beginner memorizes 'amo, amas, amat,' that when he learns 'j'aime, tu aimes, il aime,' or 'I love, thou lovest, he loves.' Virchow justly affirms, 'that the ancient languages have somewhat of an ideal purpose, is only an opinion of obstinate philologists.' They naturally will always stubbornly uphold an idea which seems to live like an eternal malady, namely: 'The ancient languages sharpen the mind more than the modern,' for these men gain their livelihood by teaching the ancient languages. Grammatical instruction in general, however, does not afford mental gymnastics at all in any language, as is so brilliantly proven in the writings of Prof. Lowenthal; for memorizing grammatical rules is not brain work, but only cramming with words without meaning, which positively none of the present needs of children demand.

"I am far from wishing to deny the beauties of the Latin and Greek classics; but who will not acknowledge that there are also many beautiful things contained in Sanscrit and Hebrew books? And yet we are contented with good translations of these. It is also true of the ancient classics that only he who completely masters the languages can appreciate their beauty, and students of gymnasia do not progress as far as that. Gutzkow is quite correct in his theory that 'one will not discover the treasures of antiquity until one reads the classics in the schools in good translations, and leave the study of the original texts to scholars.'

"But as things are now, the most important time is squandered in studying grammatical and philological vexations of the dead languages, and especially in superfluous inverted translations from German into Latin and Greek, which in the schools of the future will have to give way to much more important things—the modern languages (French and English, which the citizen of the nineteenth and twentieth centuries finds absolutely necessary for life), mathematics, history, literature, geography, physics, chemistry, all of which for training the mind are incomparably more important than all the dead languages taken together. Also drawing, athletic sport, and manual labor will receive more attention than formerly. For in a harmonious development the hand will demand more consideration than is bestowed upon it now."

V. *Dr. Paul Güssfeld* (Berlin) in Die Erziehung der deutschen Jugend, Berlin, 1890:

"Graduates of the secondary school of the future who enter the university will be lacking much knowledge with which at present the students are quite familiar. They will not be masters of Greek and Latin grammar, nor be able to read the ancient authors in the original. This concerns philologists first, then lawyers, historians, and theologians. As Hebrew is a professional study of the theologians which is acquired in the university, so Latin and Greek will in time to come be taught there, and there only. It would seem best for that purpose to establish seminaries in connection with universities for the special benefit of those students only who have a vital interest in learning the classical languages. Their diligence will be greater, their progress much faster, for the simple reason that by virtue of their general intellectual culture they will be able to understand the grammar the more easily.

"The modern language which as a medium of culture and as a substitute for Greek and Latin deserves consideration above all others is the French. Its advantages are chiefly found in the grammar, which resembles in lucidity a Code Napoleon. Its rules are strict and clear. One does not venture to violate them, but enjoys following them. This feature may be traced through the entire French literature, and no revolution could effect any change in this. There is nothing holy and sublime in France that has not been dragged into the mud by party or faction; but no one dared to touch the language with unholy hands. Respect for the French language is shown everywhere in France, from the hastily penned advertisement of the merchant to the orations of the immortals in the French Academy, and every violation of the rules of that language is punished severely with ridicule. There is no room left for arbitrary construction in syntax, as is claimed in German and Latin by every writer and speaker. But

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as a substitute for that want of liberty there is offered a wealth of words signifying similar things, so that the finest shading in expression is made possible. Thus it comes that the French language is equally well fitted for the presentation of mathematical theories and the expression of the most charming play of poetic thought.

"To master such a language, so that one may be able to express one's thoughts fluently in it without violating its grammar or groping for proper terms, is an object worthy of the highest human intellect and the most cultivated taste. The way to it, moreover, has the advantage of leading through alternately charming and grand but ever beautiful sceneries—French literature. He who sees in French literature only an accumulation of novels full of adultery betrays himself by his unjust and distorted judgment. Nor need we restrict ourselves in school to contemporaneous literature. If we exclude it there would still remain the works of many centuries to choose from."

4.—City School Systems.

Germany—The city of Berlin had in 1890-91, 290 public elementary schools and 82 private and Jewish schools; together, 352. An increase of 3 schools, 111 class rooms, and 3,518 pupils. The Protestant population in Berlin has increased 18 per cent within the last 5 years, the Catholic population 36 per cent, and the Jewish 23 per cent. The actual increase is 210,038 Protestants, 35,825 Catholics, and 14,881 Jews. Fourteen per cent of the Protestant population were found in the lower public schools; only 10 per cent of the Catholic, but 15 per cent of the Jewish population. Of the 3,141 classes in the lower schools, 3,021 had their own class rooms; 120 had to share class rooms with other classes; this was done by introducing half-day schools. Since 1889-90, the number of classes in houses belonging to the city has increased by 202, while the number of classes in rented quarters has decreased by 133. Half day instruction is given to children in primary grades and to those employed in factories. The schools of Berlin, though fully graded, have not as with us 8, but 6 grades. The following figures are instructive: of all the pupils there were in the lowest grade (1 year) 19 per cent; second grade (1 year) 19 per cent; third grade (1 year) 19 per cent; fourth grade (1 year) 18 per cent; fifth grade (2 years) 14 per cent; sixth grade (2 years) 11 per cent.

This is a distribution which few American schools can equal. What American school has still 11 per cent of its school population in the seventh and eighth grades? Toward the close of the year the average number of pupils to the teacher was 55. Besides the 3.141 teachers and 352 principals there is another corps of teachers engaged in the city schools, namely, the women who teach the girls to knit, embroider, sew, etc. Since 1863, when the first women teachers were employed, 1,325 have been in active service. Of these 956 were still in active service in 1891; 369 have dropped out (273 resigned, 222 of them have married, 32 were promoted to higher schools, 25 were pensioned, 39 died). It is found that the women teachers were absent on an average 8½ days per year within the first 5 years of service. The absence increased to 22½ days per year up to the fourteenth year of service. Up to the nineteenth year the average annual absences amounted to 8½ days; up to the twenty-ninth and thirtieth it increased to 8½ days, until in the forty-second years of age the absence amounted to 15.8 days. The calculations are not a good basis, for they offer too slender a premise. An anomaly is the fact, that in 35 Protestant city schools of Berlin instruction in Hebrew religion is given to the children of that faith. Another notable fact is that 18 principals, 91 male and 109 female and 16 industrial teachers asked for and received leave of absence or prolongation on account of impaired health. (Paed. Ztg.)

Austria.—Vienna has recently annexed its suburbs and thereby increased the number of its primary schools from 170 with 2,300 teachers, to 235 schools with 3,800 teachers and 140,000 pupils. Berlin had, in 1890, 184 schools with 3,800 teachers and 172,778 pupils.

5.—Compulsory Attendance.

The following countries have laws on their statute books which decree compulsory attendance at elementary schools. In many of these countries the law is of recent origin, hence has not had the results it will show 10 or 20 years hence. In England the law leaves it to local authorities to decree compulsory attendance at school, if they see fit.

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I.—*In Europe.*

Austria.
Denmark.
England.
France
Germany (Prussia, Saxony, Bavaria, Wurtemburg, Baden; in short every state of the empire).
Greece.
Hungary.
Italy.
Montenegro.
Norway.
Portugal.
Roumania.
Servia.
Spain.
Sweden.
Switzerland.

II.—*In America.*

Argentine.
Brazil in several states.
Costa Rica.
Equador.
Guatemala.
Mexico (in most states).
Paraguay.
Peru.
Salvador.
Santo Domingo.
Uruguay.
Venezuela.

III.—*In Australia*

New South Wales.
New Zealand.
Queensland.
South Australia.
Tasmania.
Victoria.
Western Australia.

IV.—*In Asia.*

China (indirect compulsion by means of examinations).
Japan.

—(Accord. to Statesman's Yearbook.)

Germany.—In Berlin 1,900 pupils of the public elementary schools were, in 1891, definitely excused from school at the close of the seventh year (at 13 years of age), owing to the poverty of the parents, who needed their children's aid. In 50 families, it was conclusively shown, the misery was so great that the children had to be excused at 12 years of age. The compulsory attendance law leaves such cases to be decided by the supervisory authority, to whom is given a wide margin of discretion. (Fr. pacd. Blaetter.)

England.—Concerning compulsory attendance at school in England, there is little known in this country, hence a plain statement of facts may be welcome. The "elementary educational act" of August 9, 1870, provides as follows:

"Every school board may, from time to time, with the approval of the education department, make by-laws for all or any of the following purposes: Requiring the parents of children of such age—not less than 5 years, nor more than 13 years—as may be fixed by the by-laws, to cause such children (unless there is some reasonable excuse) to attend school; imposing penalties for the breach of any by-laws. Any of the following grounds shall be a reasonable excuse: namely, (1) that the child is under efficient instructions in some other manner; (2) that the child has been prevented from attending school by sickness or any unavoidable cause; (3) that there is no public elementary school open which the child can attend within such distance not exceeding 3 miles, measured according to the nearest road from the residence of such child—as the by-laws may prescribe. These by-laws were issued by the different school boards sanctioned by Her Majesty in council and published in the appendices to the annual reports of the education department. There still existed boroughs and parishes enough which did nothing at all in this matter.

To amend this elementary act, other acts were passed in 1873, 1876, 1879, and 1880, among which that of 1876 is most important as to compulsory attendance. Sections 4 and 12 of chapter 79 run as follows: (4) It shall be the duty of the parent of every child to cause such child to receive efficient elementary instruction in reading, writing, and arithmetic, and if such parent fail to perform such duty, he shall be liable to such orders and penalties as are provided by this act. (12) Where an attendance order is not complied with without any reasonable excuse, a court of summary jurisdiction, on complaint made by the local authority, may, if it think fit, order as follows: In the first case of noncompliance, if the parent of the child does not appear, or appears and fails to satisfy the court that he used all reasonable efforts to enforce compliance with the order, the court may impose a penalty not exceeding, with the cost, 5*s.*; but if parent satisfies the court that he has used all reasonable efforts as aforesaid, the court may, without inflicting a penalty, order the child to be sent to a certified day industrial school. Moreover, this act provides for the appointment of a school attendance committee for every borough and parish for which a school board has not been elected. The act of 1880, which is very short, provides that the education department may make by-laws for those districts which have not made them for themselves. By it compulsion was first fully and universally established. All public elementary schools are administered by these acts, as well as by codes, of which a new one is issued every year. (Gust. Lenz.)

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6.—CRIME.

Germany.—The numbers annually published by the German statistical bureau concerning crimes in Germany, or the number of convictions, may, in a sense, be considered a barometer of public morals. For several years a gratifying satisfaction was entertained at the decrease in the number of crimes against property, and it was concluded that the economic conditions of Germany were steadily improving. On the other hand, it was considered an ominous sympton that the number of crimes against state, public order, and religion, as well as against the person was steadily increasing. It was regarded as a ray of hope when, in 1888, a check in the increase was noted. That year was (since 1882) the first in which a notable decrease in the number of crimes of the second kind could be recorded.

At present the result of the statistical labors for 1889 is before us, but, alas, it does not show a continuation of the tendencies marked in 1888, for not only the number of crimes against state, public order, religion, and person has increased beyond expectations, but also the seemingly constant tendency toward decrease in crimes against property has ceased, and the year 1889 exhibits a deplorable increase.

Some characteristic numbers may illustrate the foregoing statements. The crimes against state, public order, and religion in 1882 numbered 51,623 (convictions are meant); this number rose until 1887, when it reached 62,348. The year 1888 showed a decrease, namely, 61,806 convictions. But the year 1889 again records an increase, the sum total during that year being 62,815. This increase is chiefly found in the great number of cases of breach of peace (16,244 as against 14,851 in 1888), inducement to perjury (292 as against 221), public resistance (364 as against 163), while the number of escapes from service in the army decreased from 21,421 to 19,683.

The number of convictions for crimes against the person was 107,398 in 1882. It rose to 137,745 in 1887. In 1888 it fell to 134,670, but in 1889 it again increased to 139,639. Especially the convictions on acount of verbal offense (43,600 against 42,959 in 1888), assault and battery (19,730 as against 18,374), and inflicting wounds (57,191 as against 55,223) show a deplorable increase.

The crimes against property also exhibited a constant decrease in number from 1882 till 1887, namely, from 169,334 to 152,652. But the year 1889 again shows a remarkable increase, namely, to 165,623. In this increase may be recognized the characteristic feature of the criminality of 1889. It indicates a different direction from that illustrated by the numbers of 1882. The numbers especially interesting are 71,881 cases of petty larceny, (as against 65,030 in 1888); same with second conviction, 11,085 (as against 10,185); larceny, 7,978 (as against 6,972); burglary, 2,412 (as against 2,160); embezzlement, 15,888 (as against 14,781); defraudation, 15,205 (as against 13,493).

The increase of crimes against property is frequently considered to stand in intimate relation to the advance in prices of commodities and necessities; but it should be remembered that the prices of provisions did not rise until the second half of the year 1889, and that the general economic conditions of Germany were better in 1889 than in any previous year. Of course, though one is inclined to think that the rise in prices has something to do with causing the increase in the number of crimes against property, it can scarcely fully explain it when the increase in these crimes is taken in connection with that of others. One thing should be noticed, that during the reign of "protective tariff" a constant reduction in the number of crimes against property was noticeable.

How unfavorable the statistics of crime for the year 1889 are, may be seen from these totals:

Year.	Cases of conviction.	Increase.	Year.	Cases of conviction.	Increase.
1889	369,644	18,978	1885	348,087	*2,890
1888	350,666	*6,681	1884	345,977	15,849
1887	356,357	3,357	1883	330,128	160
1886	353,000	9,913	1882	329,968	

*Decrease

—(Düsseld. Anzeiger.)

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7.—Exhibitions.

Italy.—An exhibition was held in Milan in the first week in May, 1891, for the education and hygiene of children. The character of the exhibits is best seen from the programme. In Class I, toys of every description; in Class II, children's implements, musical instruments for children, etc.; Class III, under the title "The Little Artist," a collection of tools for every kind of handiwork; Class IV, contains room games; Class V, little theaters; Class VI, garden games; Class VII, apparatus for gymnastics, fishing, hunting, swimming, etc.; Class VIII, velocipedes, carrousels (merry-go-rounds), swings, and hammocks. While this part is an international exhibition, the following is strictly national. It contains in section 1, text-books and other publications, drawings, models, apparatus for object lessons, furniture and tools for schools and kindergarten; in section 2, education, apparatus for teaching how to walk, food and clothing for children, etc.

France.—The commission charged with viewing the biennial exhibition of design and manual work in the primary schools of the Sarthe district, France, has made its report. It states that the teaching of design shows a marked tendency to become more rational. The copies of models are rarer and the designs are less ill-assorted. Linear design is not proportionally represented, and there are many patterns beyond the capacity of the child. The teaching of sewing has made a great advance in the line of common sewing and the making of simple garments for daily use. The method of teaching and the arrangement of the programmes is in need of improvement and revision. Too many teachers succeed in giving the little girls a taste for luxury and frivolity, besides causing them a loss of precious time. (Lond. Ed. Times.)

Monsieur Jules Simon has inaugurated a novel and interesting exhibition in Paris, organized by the hygienic society for children, a body established four years ago for promoting the health and welfare of the young. The exhibits consist of various kinds of hygienic, orthopedic, and surgical appliances, clothing, toys, industrial products, and other articles intended for the use of children in health or in sickness. The most remarkable feature of the exhibition is a very curious and complete collection of quaint cradles, chairs, and gocarts, dating, some of them, from extremely remote periods. One of these gocarts affords a most curious illustration of primitive ingenuity, having been made by hollowing out the trunk of a tree. There are also specimens of baskets and bags used by miners' wives for hanging up their babies while at work and a wooden "crèche," used for the reception of foundlings at Lille during the Middle Ages. (Lond. Jl. of Ed.)

The Pedagogical Museum of Paris is a permanent exhibition of all kinds of teaching material from abaci and alphabet cards up to the most delicate and complicated apparatus, and all the civilized nations of the world are laid under contribution. The minister of public instruction has lately decided to enlarge its scope by the addition of a section devoted to sample copy books and exercise books to show the handwriting of the French youth. The Revue Pedagogique characterizes the new departure as a happy idea. It quotes at length the official circular inviting the coöperation of the chief inspector in preparing for the exhibition. Every district of France is to be included, but both, the class (or grade) of pupils represented, and the variety of schools are to be changed from year to year. The caligraphy of both boys and girls is to be shown, and each primary inspector is charged to submit three specimen books from his district. The minister is careful to direct that the books should be the ordinary samples, and not specially prepared for transmission to the capital. At the option of the inspector the books may contain the teacher's correction of the day's work. (Schoolmaster.)

8.—Hygiene.

Germany.—The subject of mental overpressure is important not only for parental consideration, but for scientific investigation. The capacity of the child, the number and nature of the studies, and especially the length of the recitations, are features which ought not to be overlooked or be left to the discretion of educators. That much can be gained by experimental study of overpressure is shown by a paper read by Dr. Burgenstein, of Vienna, before the congress of hygiene in London, upon The Working Curve of an Hour. The writer had for his object the study of the mental power of children, and he arranged his experiments with a view to demonstrating the fluctuations of brain power in

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children during one hour's occupation with a familiar subject. Simple addition and multiplication sums were given to two classes of girls, of an average age of 11 years and 11 years and 10 months, and two classes of boys of the average age of 12 years and 2 months, and 13 years and 1 month. After ten minutes' work the sums were taken away from the children; after a pause of ten minutes the work was resumed, the alternation continuing for an hour, so that there were three periods of work. The results were interesting. During the experiment 162 children worked out 135,010 figures, making 6,504 mistakes. It was found that the number of mistakes increased in the different periods and that during the third period the quality of work was at the lowest. The general result showed, according to the investigator, that "children of the ages stated become fatigued in three-quarters of an hour; that the organic material is gradually exhausted; that the power of work gradually diminishes to a certain point during the third quarter of the hour, returning with renewed force at the fourth quarter." The recommendation was made that no school lesson should last longer than three-quarters of an hour, and should be followed by a quarter of an hour's rest. Such a study is of especial benefit at the beginning of the school year. Children are often reprimanded for inattention when they are overfatigued, and are spurred forward when their minds need rest. "Mental overpressure" is the usual result. (London Journal of Education.)

In Germany an experiment was tried upon 162 children from 11 to 13 years of age, who were set to work out sums in simple addition and multiplication for ten minutes; then after five minutes' rest, for ten minutes more, and so on for four periods of ten minutes each in all. The result was that the total number of mistakes made was 6,504, the number increasing in the second and third period, but diminishing again in the fourth, which appears to have been better than the second. Regarding this as an experiment upon overpressure, the first thing that suggests itself is, that forty minutes of simple arithmetic, divided into periods of ten minutes each, with an interval of rest between, seems such a small amount of work to produce symptoms of fatigue that one is led to ask whether there may not have been some other cause to account for the deterioration observed? How were the intervals of rest employed? Is it not probable that such frequent interruptions may have produced a feeling of distraction and loss of concentration sufficient in itself to account for the falling off in the quality of the work? Again, 6,504 mistakes gives an average of one mistake per minute for every child; surely work so careless can not have been the cause of much mental pressure. It seems strange, too, on the evidence, that three-quarters of an hour should be proposed as the limit, taking no account, apparently, of the revival of energy in the last ten minutes of the hour. (London Ed. Times.

France.—A convention of school physicians in Paris has unanimously recommended to the city school authorities to provide every school with a set of surgical instruments for cases of emergency. Injuries, as they sometimes occur in schools, could then be attended to without delay by the teachers.

Sweden.—Dr. Wertlind, physician in the schools at Gotenburg, Sweden, has weighed the pupils of three girls' schools twice a year since 1870. During his observations, for the period of twenty years, he found that the increase in weight during the three vacation months (June, July, and August) was comparatively greater than during the remaining nine school months. The following table gives the exact average increase in Swedish pounds:

Age.	Increase.	
	During vacation.	During 9 school months.
	Pounds.	*Pounds.*
5 years	1.19	3.77
8 years	1.60	3.86
9 years	2.01	4.07
10 years	2.52	4.50
11 years	2.73	5.81
12 years	3.57	7.29
13 years	4.93	5.95
14 years	4.67	7.13
15 years	4.61	4.03
16 years	3.35	3.58

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The Prussian Pädagogische Zeitung says:

From this table it is seen that after the eighth year of age the development of girls during the nine school months is not proportional to that which takes place during the three vacation months. Up to 9 years of age the girls are not materially checked in their bodily development, but from that year on the development is checked the more the older the pupils are. We must also, in scanning this table, remember that, as a general thing, the summer is not conducive to an accumulation of flesh and fat; hence these figures are more eloquent than would seem at first. But it does not follow from the facts here presented that it would seem better to keep the pupils out of school. All that follows is that school instruction should be attended by less worry and more cheerful play. If our girls must acquire mental development at the cost of nervous prostration, as is done so frequently, it certainly is too costly an article. (Paed. Ztg.)

Denmark.—A Danish school principal in Copenhagen, Dr. Vahl, publishes the result of his similar observations through a period of nine years. He weighed his pupils twice a year, on April 1 and October 1. His observations are very valuable, since they embraced children of prescholastic age. The remarkable fact was found that during the six summer months the increase in weight was on an average about one-third greater than through the winter months. Here are the figures:

Increase in weight.

Ages.	In Danish pounds.		In per cents.	
	In winter.	In summer.	In winter.	In summer.
4 years	1.45	1.94	4.56	5.99
5 years	1.81	2.23	5.06	6.23
6 years	1.85	2.45	4.63	6.22
7 years	1.99	2.61	4.49	5.97
8 years	2.14	2.86	4.39	5.91
9 years	2.38	3.15	4.42	5.89
10 years	2.87	3.43	4.86	5.89
11 years	3.50	4.40	5.34	6.82
12 years	4.17	5.12	5.72	7.06
13 years	4.93	5.63	6.04	6.92
14 years	3.79	6.23	4.16	6.86
15 years	4.06	4.25	4.22	4.41

—(Paed. Ztg.)

9.—ILLITERACY.

Italy.—Mr. Bodio, director of the Central Statistical Bureau in Rome, has recently published a memorial upon the subject of elementary education in Europe, and particularly in Italy. In this book we find a complete summary of the results of education measured by the number of illiterates in the army during the last fifteen years. "This summary," says Mr. Bodio, "may cause us some mortification."

Per cent of illiterates.

Country.	1876.	1881.	1883.	1884.	1887.	1888.
Italy	51.99	47.74	47.96	47.22	44.98	42.93
France	16.09	14.91	13.10	12.29	10.00	.....
Germany	2.37	1.59	1.32	1.27	0.60	.....
Prussia	3.19	2.33	2.00	1.97	0.85	0.80
Bavaria	1.79	0.29	0.18	0.08	0.05	.....
Würtemburg	0.02	0.02	0.02	0.02	0.01	.....
Baden	0.22	0.09	0.02	0.02	0.01	.....
Austria	48.08	38.09	32.08	34.08	27.07	25.00
Hungary	56.09	50.08	47.07	45.00	40.02	38.06
Switzerland	4.06	2.07	2.01	2.00	1.03	1.03
Belgium	18.42	15.99	15.38	15.59	13.87	.....
Holland	12.09	10.04	9.08	9.09	8.05	.....
Sweden	0.90	0.39	0.27	0.02	0.02	.....
Denmark	.....	0.36	.....	.....	.....	.....
Servia	.....	79.31	.....	.....	.....	.....
Russia	80.30	79.04	.....	.....	.....	.....

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Germany.—While the German nation has the smallest per cent of illiteracy of any nation in the world, yet neither the Catholic nor the Protestant element has the lowest rate of illiteracy. This belongs to the Jewish element. Of 100 Protestant children 91.63 per cent attend the elementary, 4.87 per cent the middle, 3.25 per cent the high school, and .25 per cent the university. For 100 Catholic children the 4 departments run respectively 97.21, 4.18, 1.48, and .13. While for the Jews the per cent in 100 children is 53.71, 24.40, 21.20, and 1.69. That is, of Catholic and Protestant children about 10 in 100 go beyond the first or elementary grade, while 47 in 100 of the Jewish children go beyond the first grade. These figures apply only to the city of Berlin, however, where the Jews are both numerous and wealthy. This is a most remarkable revelation, and the advantage is with Jewish children, not in Berlin alone, but also throughout the empire. It is said that the same fact holds true in our American schools. Why is it that the Jewish mind aspires to the highest plane in education? It would look as though the higher average of health among the Jewish race leads to a greater measure of mental activity and sustains it. The greater average in wealth also helps to the same end. The study is an interesting one, and a comparison of statistics covering all nations would be desirable.

The following comparative columns are highly instructive, inasmuch as they illustrate the effect of compulsory education in Germany:

Ratio of illiteracy.

Province.	1875-76.	1888-89.	Province.	1875-76.	1888-89.
	Per ct.	*Per ct.*		*Per ct.*	*Per ct.*
Saxony	0.23	0.01	Meinengen	0.82	0.24
Baden	0.22	0.02	Mecklenburg-Strelitz	0.54	0.25
Bavaria	1.79	0.03	Alsace	3.45	0.26
Würtemburg	0.02	0.03	Hamburg	0.45	0.32
Hessia	0.35	0.12	Waldeck	0.95	0.38
Mecklenburg	1.09	0.14	Reuss	1.42	0.44
Lippe	0.78	0.23	Prussia	3.19	0.94

The figures represent the ratio of illiteracy found among army recruits. (Centr. Archiv.)

General survey.—A French educational journal contains the following items of information. Some of these statements are not quite correct, compared with statistical information available in the Bureau of Education (see Annual Report of the Commissioner of 1888-89), but it is reasonable to suppose that the figures here presented are obtained by omitting (*a*) private, (*b*) secondary instruction; hence they are here reproduced as probably representing public elementary schools only.

I.—School Population.

The proportion of the total population that was enrolled in school in the principal countries of the civilized world was as follows:

Country.	Per cent.	Country.	Per cent.	Country.	Per cent.
Europe.		*Africa.*		*America*—Cont'd.	
Prussia	18.25	Cape Colony	23.00	Ecuador	2.00
England	16.20			Uruguay	5.00
Switzerland	15.00	*America.*		Venezuela	5.00
France	14.64				
Holland	14.00	Canada	21.50	*Oceanica.*	
Austria-Hungary	11.50	United States	20.20		
Belgium	10.00	Jamaica	11.00	Australia	18.00
Italy	9.00	Trinidad	9.00	Tasmania	12.00
Russia	1.80	Costa Rica	7.00	New Zealand	19.00
		Guatemala	3.00	Sandwich Islands	11.00
Asia.		Nicaragua	5.00		
		Argentine	6.50		
Japan	9.00	Chile	3.60		

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II.—ILLITERACY.

(*a*) *In general.*—Russia, Roumania, and Servia, about 80 per cent; Austria-Hungary, 42 per cent; Ireland, 21 per cent; France, 15 per cent; Belgium, 15 per cent; Holland, 10 per cent; United States (white), 8 per cent; Scotland, 7 per cent; Switzerland, 2.5 per cent. In Sweden, Denmark, Bavaria, Würtemburg, Saxony it is very rare to find a person that can not read.

(*b*) *Can read only.*—Germany, 94 per cent (evidently too low a figure); England, 91; Austria, 88 (does not agree with statement under "Illiteracy" *a*); France, 88 per cent; Italy, 74 per cent; Spain, 69 per cent; Russia, 53 per cent.

(*c*) *Can compute.*—Germany, 89 per cent; England, 81 per cent; France, 77 per cent; Austria, 75 per cent; Italy, 53 per cent; Spain, 49 per cent; Russia, 39 per cent.

(*d*) *Know another language than the mother tongue.*—Germany, 69 per cent; Austria, 61 per cent; England, 34 per cent; France, 29 per cent; Italy, 28 per cent; Spain, 13 per cent. (These statements are, to say little, very extravagant.)

(*e*) *Have received a classical education.*—Germany, 32 per cent; England, 21 per cent; France, 20 per cent; Italy, 17 per cent; Austria, 13 per cent; Spain, 7 per cent; Russia, 2 per cent.

These statements vary but little from similar ones published a year ago. (Revue Pedag.)

10—LANGUAGE STUDY.

Learning languages through self-instruction.—In an age like ours that brings people of foreign tongues into contact so often, an age in which the polyglot literature of periodicals and books plays an important rôle, the number of adults who learn foreign languages through self-help is by no means small. Each of these self-made linguists is likely to have his own method and reach the goal he sets for himself in his own inimitable way. But though every road leads to Rome, a sensible pilgrim will want to know several to choose from. For this reason such quiet indefatigable workers may be reminded of the methods of two men who, by means of self-instruction, acquired an unusually great amount of linguistic kowledge and have become famous in this respect—Schliemann and Macaulay.

Schliemann, the distinguished German archæologist, who "first served as a commercial clerk, then, when he became head of a commercial house doing an extended and successful business, learned English, French, Dutch, Spanish, Portuguese, and Russian; later on, modern and ancient Greek: lastly, Latin." He writes of himself in his Ilios: "Then I occupied myself for two years exclusively with ancient Greek literature and, I may say, I read cursorily during this time nearly all the classics, and the Iliad and Odyssey several times. Of Greek grammar I merely learned the declensions and the regular and irregular verbs; but with grammar rules I lost not a minute of my precious time, for when I saw that not a single one of all the boys who had been tortured with tedious grammar rules for more than eight years was able afterwards to write a Greek letter without making hundreds of the coarsest errors, I concluded that the method followed in the high schools was radically wrong. My opinion is that one can gain a thorough knowledge of Greek or any grammar only through practice, *i. e.*, through thoughtful and attentive reading of classic prose, and through memorizing some of its best model pieces. Following the primitive method, I learned ancient Greek, and now can use it like a living language. I fluently write in it, and orally express my thoughts readily and without difficulty on any given subject, provided always I have thoughts to express on that subject. I am familiar with all the rules of grammar, though I rarely know whether the rules I follow in speech and writing are recorded in grammar or not." Schliemann fails to tell us how he read the first Greek work. Doubtless he did it with the aid of a translation, and not with a dictionary.

Lord Macaulay, the great English historian, learned modern languages in like manner. "When I want to learn a language," he wrote from Calcutta in 1836, "I always begin with the Bible, which I can read without a dictionary (Macaulay knew the English New Testament by heart). In the course of a few days I know the patch words (prepositions and conjunctions), and the commonest syntactical rules, and come into possession of a pretty large vocabulary. Then I attack some good classic work. Thus I learned Spanish and Portuguese, and a similar method I shall some day employ in learning German." A year later he wrote: "On my way home I intend to learn German. I am told that is a difficult language, but I do not believe that there is any language which I can not master in four months,

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working 10 hours daily." And a few months later: "When I arrive in England I mean to have mastered German. In my leisure hours I have broken the ice by reading Luther's translation of the New Testament half through, and I am now quickly making my way through Schiller's history of the Thirty Year's War. Schiller's style pleases me very much. His history is rich in very correct and profound thoughts, expressed in so simple and pleasing a language that only blockheads can think him superficial.

The prodigious knowledge of languages of a Macaulay or Schliemann are usually explained by the supposition that they possessed an extraordinary linguistic talent. However, that may be a fallacy. If we consider that these linguistic genuises were always persons who permitted themselves no other recreation and pleasure than reading, and consequently employed every available moment in reading, we shall look upon the wonderful results mentioned rather as a feat of enormous diligence and incessant practice. What Macaulay, outside of his professional and literary activity read, is truly fabulous. It seems as though he had read every English book published; the bad and unimportant books once, classic works repeatedly, and the historians (both English and foreign) incessantly. Hence the English saying: "A book which has not been read by anybody, save Macaulay."

On his way home from India he read Schiller's and Goethe's complete works, Müller's Swiss History, some works of Tieck and Lessing, as well as the works of other less noted German authors. In a letter to his sister he writes: "I have during the entire voyage read with grand enjoyment, having devoured Greek, Latin, Spanish, Italian, French, and English; folios, quarto, octavo, and other volumes." And to a friend he wrote more in detail: "I have read with a truly voracious appetite the Iliad and the Odyssey, Virgil, Horace, Caesar's Memoirs, Bacon's De Augmentis, Dante, Petrarch, Ariosto, Tasso, Don Quixote, Gibbon's Decline and Fall of Rome, Mill's India, all the 70 volumes of Voltaire, Sismondi's History of France, and the seven thick folio volumes of the Biographia Brittanica." Critical and æsthetic views, together with notes upon the impressions some of these works had made upon him, or upon the rising or sinking of an author in his estimation after having read him, form the conclusion of his letter.

Concerning the manner of his reading, he says "I do not read any longer as I read in college, but like a man of the world. If I come across a word I do not know I pass it unless it be that its sense is essential for the comprehension of the sentence."

Bulwer-Lytton, the romance writer, dramatist, and politician, expresses himself in a school oration concerning regular work as preferable to inborn linguistic talent by saying: "Only he can really accomplish much who does not attempt too much at one time. I have traveled much, have occupied much of my time with politics and other public and private business, and besides, have written more than 60 volumes, some on subjects which required much study and searching investigation. And now, how much time do you believe, my young hearers, I spent in study on an average, that is, in reading and writing? Three hours a day. and when Parliament is in session, even less. But during these hours my heart and soul are enlisted. It is therefore not necessary, that in order to accomplish much intellectual work, one should attempt to do much at a time; but it is absolutely essential that he work regularly and every day. If once a week you pour a whole tub full of water on a stone, no impression is made, but if you continually let a drop fall on it, the proverb tells you that the stone will be worn away."

From the foregoing we may take two lessons: (a) Do not base the study of a foreign language upon a grammar (with vocabulary, rules, etc.), but upon a work written in the respective language. (b) Work regularly and daily.

To use the same method with adults and young people would, however, not seem advisable. The school method must needs be different from the method of the adult "autodidact," self-teacher. The pupil is young and has a teacher who stimulates him; the autodidact has a mature mind and learns without a teacher and without stimulants. He who stands between the two as a link, is the student of the upper classes of secondary schools, the young man of 16 to 20 years of age. This youth is ripening in judgment and character and may, or ought to be led to treat himself as the autodidact does. When he enters life or a university he will be the better enabled to cope with difficulties, the more he has learned to help and teach himself. The "joy of learning" this wonderful stimulus must not be quenched by too much assistance. (After Schweiz-Lehrerztg.)

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France.—The French minister of public instruction, noting that in learning English it is the pronunciation that is the most difficult part, has decreed, in accordance with arrangements made with the minister of posts and telegraphs, that in future the Paris-London telephone line is to be placed at the disposal of students of languages. Other international lines as erected are to be used in the same way.

11.—Libraries for Pupils and Teachers.

School Libraries in France.—There can be no doubt that the inhabitants of large cities can find the necessary and desirable books for recreative and instructive reading without difficulty, even though they may not have a well arranged public library such as nearly all American cities have. But it is quite a different thing in the country. Both the collection of books as well as the proper persons to advise in the purchase of books, are often wanting. This is the case in France more than in other countries. The inconveniences—want of books for those who have left the schools, and a proper person who could make a suitable selection in the purchase of books—have been met in France by establishing libraries in the city and village schoolhouses, the use of which is free for pupils and adults.

As early as the year 1860, M. Roland, the then minister of instruction, ordered that in the building plans of schoolhouses, the expense of which is partly borne by the state, should provide for a suitable library room. This order indirectly stimulated the establishment of school libraries. Previous to that, books had been procured, but despite liberal expenditures, the collection had melted away, owing, no doubt, to the want of proper supervision and administration.

A ministerial order of June 1, 1860, which with slight changes is still in force regulated the organization of new libraries. Article 1 of this order made it obligatory to establish a library in every public school which should contain (*a*) the books used by the pupils in the schoolroom and others to aid them in their studies; (*b*) instructive and entertaining works for the use of adults. The library should be placed under the supervision and management of a teacher of the school, and should at all times be subject to the inspection of the supervisory school authorities.

Of course the selection of books to be purchased offered various difficulties, hence it was determined that the school inspector of the district should pass judgment over the selection. However, it was soon found that this unduly increased the duties of the inspectors, burdened as they were, with the supervision of instruction and the keeping of records. Hence the minister of instruction created a permanent library commission, who were instructed to make and publish lists and catalogues of books suitable for pupils as well as for rural communities. This commission entered into an agreement with one of the largest publishing houses in Paris, which was to furnish the books mentioned in the catalogue to communities at reduced prices. The first catalogue of this commission appeared in 1868.

Aside of this action on the part of the Government, several bequests of private persons and subsequent State appropriations have made the rapid growth and spread of these libraries possible. While in 1864 France had only 4,873 of such school libraries, it had in 1878 20,871; and in 1889 their number had increased to 36,326. The number of volumes borrowed was 5,576,586 in 1889. The money derived from private persons, communal and provincial authorities, amounted to 4,680,689 francs in 11 years, from 1878 until 1889. During the same time the minister of instruction spent 2,250,000 francs for the establishment and maintenance of these libraries from appropriations made by the state for his department.

Now, as regards the rules and regulations in force, they date from the year 1862, as has already been stated, and have not since essentially changed, except the law of June 16, 1881, which decreed abolishment of tuition fees, affected these libraries; for since the school assumed the character of gratuitiveness a great number of very poor children entered it. Hence, the number of free textbooks had to be materially increased, which necessitated strict economy and even temporary cessation of the purchase of books for adults until the state came to the rescue.

It is quite interesting to peruse the catalogues published by the permanent library commission, the last one of which was published in 1888. It mentions 2,594 works, among which we find alphabetically and topically arranged diction-

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aries, biographies, histories, books of travel, literature, national economy, morals, hygiene, agriculture, history of art, and miscellaneous books. Authors and publishers submit their works for examination, if they wish to have them recommended by the commission. The titles of those inspected and found suitable are first published in the bulletin administratif of the minister; after that they are inserted in the catalogues of the commission.

In order to cause the local school authorities as little expense as possible the mails transmit the books without postage, just as the United States Government does its own publications. Usually several communities combine to send one order blank filled out to the minister, who hands it over to the publisher with whom the agreement has been made.

According to the last census France had 36,121 communities. If we compare with this number the number of school libraries in existence, namely 36,336, it would seem as though every community of France had one or more of such libraries. That is, however, not the case. A great many large communities have several schools, while in some places a common library exists for two schools. In 1889 France had 25,402 boys', 23,452 girls', and 18,681 mixed schools, a total of 67,515. Now, if we compare the number of school libraries with this total number of schools we find that there are still 31,189 schools without a library.

The reports, which we have quoted at length, demand establishment of new libraries and increased purchase of books in order to promote the intellectual culture of the people. We read, "Every government of France, since the year 1789, has bestowed attention upon intellectual liberation of the people. Since the decree of the year 1894, which ordered that common gratuitous instruction should be introduced for all citizens and all stata of society until June 16, 1881, which brought the famous law that was the crowning of the work begun nearly a hundred years ago, the most distinguished men of France and lawgivers have occupied themselves with the necessity of intellectual development of the people through instruction and education. But school instruction can have an abiding result only when the pupils, after leaving school, are offered opportunities for further development." This correct, although not everywhere appreciated idea, gave rise to the establishment of continuation schools. However, this course of instruction, excellent as it may be, can not do all that is desirable, because French children go to work at a much earlier age than is customary in other countries; hence the absolute necessity of libraries. The countryman in the hamlet, the laborer in town, all find in them sources of instruction and recreation. Books at home are the most natural complement of school instruction. (After L. Fleischer.)

Pedagogical libraries in France.—The French pedagogical libraries, intended for the exclusive use of teachers, are in organic connection with the cantonal (or township) school conferences. A statute of February 10, 1837, mentions them first, and article 15 orders that they be preserved and increased by means of contributions of teachers, or other gifts and bequests. But when in 1849 all educational meetings were prohibited, on account of apprehension of their becoming political clubs, the libraries "melted away." In 1875 they were revived. A ministerial decree of January 4, 1876, promised active assistance on the part of the central government, which "recognized the just demands of many teachers for professional libraries." A later order, dated May 15, 1879, created a commission which was charged with designing a plan of organization for libraries, the object of which was to acquaint teachers with the best books and methods of teaching for elementary schools. This commission, of which the minister of public education was chairman, resolved to leave the establishment of such libraries to private enterprise, and confined its labors to issuing a catalogue containing the titles of books that deserved to be studied. This catalogue was published in 1880; a second, much larger, edition appeared in 1888. (Memoires et documents scolaires publiés par le Musée pedagogique" (1. serie) fasc. No. 22, contains this catalogue). Since 1880 the credit opened by the central government for teachers' libraries that had been made available by placing them in school houses, was raised 20,000 francs ($4,000); besides this sum, the minister of education allows the management of these libraries 30,000 francs ($6,000) annually.

The management of these teachers' libraries is not uniform throughout the many departments of France. The different rules and regulations in force vary considerably. Hence, in order to obtain an insight into the working of the libraries the different regulations would have to be compared. Most of the libraries are the result of coöperation on the part of teachers. When a respectable nucleus is formed the Government recognizes the institution and subsidizes it. The following are the leading rules:

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ART. 2. This library is designed to supplement the private collection of books owned by teachers; it shall contain chiefly pedagogical works. It is under supervision of the school inspector of the "arrondissement" or "canton" (or school district as well as communal unit); a teacher of the district acts as librarian and treasurer.

ART. 3. The library is empowered to accept gifts and bequests in form of funds or books, but no book is to be placed on its shelves without the sanction of the "inspector of the academy" (or provincial school inspector).

ART. 4. A "founder of the library" is every one who pays an annual fee of at least 20 francs. A "contributor" he who pays an annual fee of at least 5 francs. The names of founders and contributors are placed in a conspicuous place in the hall of the library.

ART. 5. All teachers of public schools who desire to make use of the library are members after the payment of 2 francs per annum.

ART. 6. The library is managed by a committee of the school inspector, the librarian, and three teachers, annually elected by the members. Their functions are performed without remuneration.

ART. 7. This committee meets at least four times a year; it determines upon the purchase and acceptation or rejection of books given to the library; it reports upon its negotiations with authors, publishers, and private persons, etc. Its accounts are submitted to discussion of the teachers' conference.

ART. 8. At the meeting of the conference which takes place in December, the annual report of the treasurer is submitted.

ART. 14. The period for which a book may be borrowed must not exceed four weeks; 5 centimes fine are to be paid for each additional day.

These libraries are generally found at the central town of a "canton," in which the meetings are held; they are placed in schoolhouses centrally located. The minister of education presents each library annually with thirty to forty books selected from the official catalogue mentioned above. Certain city governments have recognized the importance of these libraries and opened an account for them in their budgets. Thus the city authorities of Toulon pay 600 francs per year to enable the teachers' library to subscribe for the most distinguished educational periodicals. The catalogue referred to contains three divisions, namely, (1) scientific works, (2) works upon education (theory and practice, psychology and history of education), and (3) reference books, to which division belong all official reports on education, home and foreign.

A desirable extension of the usefulness of these libraries is found in the so-called pedagogical reading circles. In some cities the authorities have reserved a room in the city hall for the teachers' libraries, which serves also for meetings of the "library society" or "reading circle." In Luneville a circle was organized in 1881 by the teachers then assembled in annual convention. The name adopted was "Pedagogical and Literary Circle of Luneville." It had the nucleus of a library, and now added a school museum. The annual dues were fixed at 2 francs. The teachers serve voluntarily as librarians and custodians. One of them is always found at specially designated days and hours in the hall of the circle. The city council defrays the expenses for furnishing, heating, and lighting the hall, and, besides, contributes to the institution a sum of money for the express purpose of subscribing for the six best educational journals of France. All substitute teachers and such as are not definitely employed are exempted from paying fees, but must, when needed, render aid to the librarian and custodian. The library consisted in 1889 of 1,308 volumes; the number of books borrowed and taken home was 245. The museum had 875 articles. The first Saturday evening of every month is devoted to lectures on pedagogical subjects which are in close connection with the practical work in school. For young men preparing for the teachers' examination special aid is offered in lessons and lectures. The first list of pedagogical libraries of France was published in 1879. In that year France had 926 such libraries, with 113,997 volumes. In 1880 the number was 2,068, with 361,898 volumes, and in 1888 the number had reached 2,683, with 895,367 volumes. The reports of the minister of education, however, reveal a surprising fact, namely, that the number of books borrowed is comparatively very small; in some provinces it sank to 5 in a year. In most of the others it varied between 20 and 40 per year, and only a few of these libraries are frequently used. The general impression gained from the official reports is that the present condition of the pedagogical libraries is not a satisfactory one; progress is shown only in isolated places. The causes may be found in circumstances of material nature, partly in the quite remarkable indifference on the part of the teachers.

Lately several attempts at improving the conditions of these libraries have been made; reforms were proposed from different sides. Thus, for instance, it

has been suggested to centralize the many cantonal (or district) libraries and establish departmental (or provincial) ones; others proposed a partial change by combining all small libraries of one school inspectorate to one good-sized one. Still another project was promulgated in 1874. A benevolent gentleman offered to give 30,000 francs in case the libraries were established according to the following plan: Each inspectorate should establish a central library containing all the more valuable books and books of reference, while the small local district libraries be kept intact. In these small libraries should be examined all the educational works published, and the approved ones be placed in the central library. But this plan found no approval, and the Government began to take other measures which found much praise in Europe, *i. e.*, it laid the foundation of good private libraries by offering and presenting books to individual teachers.

A circular letter of the minister of education of April 3, 1882, reads as follows: "In order that the teachers' normal schools should exercise an abiding influence upon the teachers, I am willing to present every graduate of a normal school who enters this year upon the profession a number of books selected from among those which appeared to him indispensable during his time of study. This small collection of books which he takes with him shall awaken and preserve in him a love for his profession; shall console and constantly aid him, even though fate may send him to the remotest corner of the country. If the young man adds to these books others, such as he can borrow from the pedagogical library of his school district and canton, as well as by mail from the 'Musée pedagogique' in Paris, he will never feel lonely, forsaken, and condemned to inactivity. He will be enabled to continue his studies and increase his knowledge. In order that this object may be secured without delay I empower the faculties of the normal schools to provide each graduate with a number of educational books that each may select himself, but the sum total of which must not exceed 70 francs for one teacher." It is to be regretted that subsequent legislative bodies did not provide for the requisite appropriation to carry out this plan, but the teachers in France hope that another year will see the plan of the minister revived and adopted by the Chamber of Deputies.

It is generally acknowledged as the best policy to leave the cantonal libraries intact, but to improve their management (1) by allowing the teachers the selection of books to be purchased, (2) by giving these libraries the franking privilege (through the mail), (3) by paying the librarians a salary, and (4) by interesting all the teachers through making them pay a compulsory annual fee. This last proposition has, however, found violent opposition, since its execution would violate the letter and spirit of the law which created these libraries. It is said that a reduction of the membership fee from 2 francs to 1 franc would be a wiser step.

The severest criticism these libraries have found is to the effect that they are exclusively pedagogical, *i. e.*, contain nothing except professional works, while "the truest pedagogical library is any well-stocked library," says one departmental report, which suggests the acquisition of other than purely professional books. This consideration seems to have prevailed, for the catalogue published in 1888 contains a number of titles of books of fiction and others. It is supposed that teachers who have performed a hard day's work in the schoolroom are not inclined to subject themselves to difficult scientific study. And in connection with this the normal schools are severely criticised for failing to awaken a love for reading in their pupils. "The study of literature suffers from the exclusive attention paid to professional studies in these schools." Some inspectors have succeeded in gaining a kind of control over the reading of their teachers by requiring a report of the names of books they have read, a statement as to their contents, and some criticisms, which are discussed in their regular monthly conferences.

In general the statistical data given show that the pedagogical libraries in France have made progress during the last ten years, and the interest exhibited by local authorities in their establishment and preservation is an encouraging sign. The authorities hope that the present indifference of teachers and school officials will slowly give way to greater professional activity. To this end the central departmental and cantonal authorities are joining hands. (After L. Fleischer.)

12.—Manual Training.

Germany.—Manual training at Leipsic. So much attention has been drawn to the Lloyd Seminary at Näas that the similar institution which is carried on in the old Thomas School at Leipsic, under the direction of Dr. W. Gotze, hardly gets the attention which it deserves. But to those who wish to pursue their

manual training studies, to those who can readily follow the lectures on the subject given once a week at the university at Leipsic, and to those again who, besides studying manual training, wish to perfect themselves in German and to see German life a little more from the inside than is possible in ordinary traveling—to all such we venture to think the Leipsic institution will prove more and more attractive every year. To a doctrinaire of the Nääs school Leipsic yields an admirable corrective. A list of subjects of the lectures given last August will suggest the bill of fare provided for those who have a good knowledge of German. "Herbart's Relation to the Manual Training Moreement," "The History of Chip-Carving," and "Voices from the Middle Ages and from the Eighteenth Century in Aid of Our Contention," were among the subjects treated of last August. But even more stimulating were the addresses given by Herr von Schenckdorff and Dr. Gotze on their return from the Strasburg conference at the end of the month. Those who are less proficient in German may acquaint themselves with the history and objects of manual training in Germany by borrowing from the library of the institute some interesting documents by Dr. Gotze which have been translated into English, and they may in the mean time increase their knowledge of German by assiduous attendance at the excellent city theater, at which the cost of students' seats, numbered and reserved, is not more than 7½*d.* a night. Prominence is given to these particulars respecting the theoretical side of manual instruction, because it is the part which is most frequently neglected, especially in England, and because, too, contrary to the common opinion, it is hopeless to expect any useful results from manual training unless teachers attend as carefully to theory as they do to practice. With regard to the five subjects in which practical instruction is given at Leipsic—carpentry, light metal work, chip-carving, card board, and (for the first time this year) gardening—full particulars will be found in the prospectus. Any additional information will be readily given by Dr. Gotze, whose address is 19 Kaiser Wilhelm strasse. (Lond. Ed. Times).

The German Society for Manual Training has made extensive statistical inquiries concerning the present status and extent of manual training in Germany. The results of these inquiries are published by Mr. Sontag in pamphlet form. We cull the following items:

The greatest number of manual training schools in Germany are found in the Kingdom of Saxony, namely, 42; then follows the province of Silesia with 17; then the Thüringian principalities with 16, the Free Cities with 13, the province of Saxony with 10, the provinces of Hanover and Brandenburg with 9 each, Alsace-Lorraine with 7, and Bavaria with 6. Besides, there are over 50 of such schools in other parts of Germany; Rhenish Prussia has 5. The sum total is 186, situated in 120 cities and towns. The following parts of Germany have no manual training schools at all: Anhalt, Brunswick, Mecklenburg, Lippe, Hessia, Oldenburg, and Waldeck; neither the provinces of Pommerania and Westphalia. From this it is seen that most manual training schools are found in and around industrial centers. Schools for boys' hand work have been established in mountainous regions, where they are designed to aid the people to overcome the miserable industrial conditions under which they are suffering. In agricultural regions, on the contrary, the need of establishing such schools has not been felt.

Of the 186 manual training shops enumerated only a few in Silesia and Saxony have industrial purposes. The majority serve educational purposes. Sixty-seven of these, in 62 cities, were independent; 107 of them stood in some relation with the public or private institutions. Thus, for instance, 12 normal schools have introduced manual training (6 alone in Saxony). All these normal schools work according to their own plans, and harmony between the different schools in course of study and action is not found. Fifteen orphan asylums have introduced manual training, 12 private and public schools train in the use of tools, also 55 Knabenhorte asylums for boys after school hours. It is remarkable that of the institutions for abnormal pupils 24 have adopted manual training, namely, 10 reform schools, 2 schools for idiots, 5 blind asylums, and 7 asylums for deaf-mutes. That for the pupils of such institutions training in hand work is an essential requirement of success is seen from all the reports received from these institutions.

The establishment of manual training shops began about 1879. At this time manual training received a notable impetus in Germany by the vigorous action of Capt. Clauson von Kaas, who, in 1880, in Emden, and later in Dresden, trained a number of teachers in this new branch of study. Since that time several factors have been active as founders of manual training schools. Societies and private persons in some places, in others communal and state officials, are inter-

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ested in promoting manual training. While in the year 1884 the number of shops was about 50, in 1888 the number had nearly quadrupled; in like manner the number of pupils increased from 2,080 in 1884 to 5,678 in 1888. The majority of these pupils, namely, 67 per cent, were less than 14 years of age, while 24 per cent were pupils of intermediate, high, and normal schools.

Concerning the subjects taught in these shops the report says that pasteboard work, wood-carving, and joiner work are everywhere taught first. These seem to be the chief occupations. In 1888 77 manual training shops had taken up pasteboard work, 61 wood-carving, 60 joiner work. Of the pupils 43 per cent were occupied with pasteboard work, 32 per cent with wood-carving, 31 per cent with joiner work. Seven of these schools teach forging, molding, and other light metal work; in three of them modeling is taught. Here and there are found painting on wood, scroll-saw work in wood and metal, turning, cane-braiding, brush and broom making, basket-braiding, straw-mat braiding, fillet-netting as branches of the course. These latter branches are offered only in places where the school is intended to aid the home industry.

It is pleasing to notice that most of the schools follow courses which are founded upon pedagogical principles; the models are made by teachers themselves or copied from the well-known Leipsic models.

Instruction in these manual training schools is given by 208 professional teachers and 48 artisans. The question whether artisans or teachers should be employed in manual training schools has been successfully solved by experience. Since 1880 the ratios of artisans and teachers in manual training schools have been:

	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Teachers	29	39	50	56	61	64	72	79	81
Artisans	71	61	50	41	39	36	28	21	19

The number of professional teachers instructing in the workshops has gradually increased to 81 per cent, while the number of teaching artisans has decreased accordingly. In training shops maintained solely for educational purposes professional teachers only are employed. Several reports state that in schools where artisans are still employed teachers are greatly to be preferred. In schools, however, that are intended for industrial purposes it is found that skilled artisans are preferable, because they have an eye towards practical utility such as professional teachers are not likely to have. Special courses for teachers in the Normal College of the German Society for Manual Training have been very successful in supplying schools with teachers preparing to teach manual work. Since the year 1880 about 1,000 persons have gone through a course of study in that school, which is situated in Leipsic.

The German teachers have been repeatedly charged with indifference toward the cause of manual training. This charge is only too true, but in a measure this indifference has its cause in stolid opposition to manual training. Manual training claims the assistance of the teachers, and very essentially changes and modifies the time-honored limits of a teacher's activity. Manual training has nothing to fear from opposition; on the contrary such opposition as it finds among the teachers proves to be a benefit. This is partly proved by the statistical data before mentioned. Any one who introduces manual training into his school is obliged to sacrifice time, and energy, and even means. Yet, wherever it has been introduced the initiatory steps were taken by schoolmen. Nine of the twelve independent workshops have been established by educators.

As far as the time of instruction is concerned most manual-training schools admit twice a year, in the spring and fall. The school is better attended during the winter than the summer semester. In Berlin, Posen, and Halle, vacation courses are offered. Generally 2 hours per day are devolved to hand work in the shops; in a few places 1 to 1½ hours; in others 2½ or 3 hours per day are set aside for it. The number of pupils in a class for pasteboard work is from 12 to 20; for wood carving, 10-24; in joiner work from 12-16. Tuition fee is charged in almost all schools. Very few offer gratuitous instruction. In some places the fee has to be paid in advance, in others a monthly fee is charged. The fee varies between half a mark and 10 marks per month (12½ cents to $2.50). The The average fee is between 1 and 2 marks (25 and 50 cents).

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A number of manual-training teachers teach without special salary; others are satisfied with the small sum remaining after material, rent, and gas are paid for. Fixed salaries to teachers are paid here and there, and 1 to 2 marks per hour is about the usual price paid. The annual salaries range from 75 marks ($19) to 105 marks ($26).

The sums expended for the establishment and maintenance of manual-training shops are not very large if measured with an American standard. During the year 1888 the sum total raised and used for this purpose is estimated to have amounted to 50,000 marks, or $12,500. This insignificant sum was raised by school authorities, societies, private persons, subscriptions, tuition fees, and bequests. Pitiably small as the sum may seem to us, we must bear in mind that a mark goes as far in Germany as a dollar does in America; but even that would not come up to the sums spent in this country. Manual training has assumed enormous proportions in the United States, where entire city-school systems have adopted it. (After Paedagogium.)

13.—Medical Supervision.

Medical supervision of the schools in Paris.—The present institution of medical supervision of the schools in Paris does not date further back than 1884, although previous to that year the schools were not entirely without supervision by physicians. The law of 1833 (June 28) had charged the school committees of the respective towns and cities with the care of keeping the schoolhouses clean, while a royal ordinance of 1837 (December 22) made it a special duty of the female supervisors of maternal schools (kindergartens) to watch over the health of the little children in the infant asylums.

For the city of Paris separate governmental decrees had been issued, while the two decrees mentioned had reference to all the schools of France. The decrees of 1842 (December 20) and 1843 (May 19) ordered that every public boys' and girls' school should be visited by a physician who was to inspect the localities and the general health of the school children. For private schools and maternal schools similar regulations were issued. These school physicians of public institutions and the lady inspectors of maternal schools were appointed by the "prefect" of the department selected from nominations made by the mayor.

However praiseworthy this arrangement was, it had a great drawback. In the annual budgets of the communities no provision was made for paying these physicians, hence an appeal to the generosity of the medical fraternity was necessary. Many offered their services and acted gratuitously for many years.

In January, 1878, Messrs. Lauth and Harant, members of the general council of the Seine department, moved a reorganization of the medical service in school. Their endeavors were not without speedy success, for during the session of April 23, 1879, the council voted in favor of paying for medical supervision of the schools during the last six months of that year. The sum appropriated was 34,200 francs. New regulations issued by the prefect determined certain mooted questions and defined the duties of the physicians. The Seine department was divided into 114 medical districts, of which 85 were within the city of Paris. Each district contained between 20 and 25 schoolrooms.

The medical inspectors, who had to be graduates of well reputed schools of medicine, were nominated by the mayors of the different arrondissements (wards), and appointed by the prefect of the department.

Their term of office was three years, at an annual salary of 600 francs. They were obliged to visit the schools of their district at least twice a month, carefully inspect the localities, and remove any children found to be suffering from contagious or infectious disease. They even were empowered to order a school closed in time of epidemics.

During the absence of the physician, the principals of the schools had to watch over the health of the pupils in their respective buildings. In order to assist them in this, the authorities provided them with instructions issued by the supreme sanitary council of Paris, according to which they could detect the symptons of contagious and infectious diseases. In Paris the medical service in school stood under the immediate supervision of the mayor of the "arrondissement," while in the surburbs and the country the head of the "canton" watched over the faithful discharge of duty on the part of the physician.

Up to the year 1882 the entire expense for the new institution was defrayed by the "Department," but in that year the communal budget of Paris contained the item of 53,000 francs for salaries of school physicians.

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The expenses made during the first period of three years of service had taught the authorities valuable lessons, which led to the following reforms: It was found that the number of schoolrooms (20 to 25), given to one physician to supervise, was too large; the consequence was that the examination of individual children with reference to their eyesight, ears and teeth (the seats of most children's diseases), could not be minute and exact enough, hence the city council appointed a commission which worked out and submitted a new statute, or set of regulations; this was adopted on November 7, 1883, and went into effect January 1, 1884.

The most important points of these regulations, which are still in force, are as follows:

ART. 2. The public schools of the city of Paris are for the purpose of medical supervision to be divided into groups of from 15 to 20 schoolrooms. Any maternal school is to be reckoned as two rooms. A redistricting takes place every three years. The prefect performs this duty. Newly opened schools are assigned to the nearest "medical group."

ART. 3. The salary of a school physician is 800 francs per annum ($160).

ART. 4. The physicians are nominated by the mayors and appointed by the prefect of the department.

ART. 5. The tenure of office of these physicians is for three years.

ART. 8. Every school physician must announce to the mayor his address of residence or office, and the hours at which he can be found there. This statement is published at a conspicuous place in the respective schools.

ART. 9. A book must be kept in every public school and maternal school, in which the school physician notes down his observations. This book must be submitted to the inspection of officials and supervisory authorities.

ART. 10. The school physician is obliged to visit every public and maternal school twice a month, but he must also appear there when the mayor or prefect may see fit to order a visit.

ART. 11. When visiting a schoolhouse the physician shall first thoroughly inspect the "localities" (corridors, stairs, waterclosets, etc.). In doing so the principal of the school is to accompany him, so that he may receive suggestions from the physician. Then the latter visits each class-room, and after he has inspected them with reference to light, heat, ventilation, and furniture, etc., he must proceed to examine the pupils separately, especially those who are pointed out by the principal and teachers as showing symptoms of indisposition. After the examination of a schoolroom and its inmates is completed, the physician enters the results into his book intended for this purpose. He answers the different questions and tabulates his answers in the columns provided for them. In the column "ad hoc" he enters the names of those children in whom he has noticed symptoms of approaching disease, states that their withdrawal from school proves necessary, and especially notes whether the disease is contagious. Finally he enters the number of pupils absent on account of sickness on the day of his visit, and inquires of the teachers what sickness, if any, seem to be prevalent at that time.

ART. 13. At least once a month a thorough examination of each child is to be made with reference to eyes, ears, and teeth, if the physician finds an inclination to disease, or if the general state of health of a child needs special attention on the part of the parents these must be notified by the physician's certificate, which is to be handed to the child.

ART. 14. Children in whom the physician discovers the symptoms of a contagious or infectious disease are to be sent home at once with a sealed letter, in which the physician states the cause of this step. In this letter the parents are notified that the child is not permitted to attend school until it comes with a certificate signed by a school physician announcing its complete recovery.

ART. 15. The principal of every school keeps at hand a series of instructions issued by the supreme sanitary council, in which the symptoms of contagious and infectious diseases are stated. If a child gets ill during the absence of the school physician, the teacher of the respective class room notifies the principal. If the latter finds symptoms of a contagious or infectious disease, he must send the child home with a sealed letter, in which he asks the parent or guardian to call at the office of the respective school physician during his office hours, which are mentioned.

ART. 16. A certificate of recovery may even be required of children who have been absent for any length of time on account of sickness, without having been sent home. In this case the nature of the illness is to be stated unless the child is subjected to a special examination by the school physician, and thus acquires a certificate of recovery.

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ART. 18. Within twenty-four hours after each sanitary and medical inspection the physician is obliged to report to the mayor of the arrondissement (ward) about the sanitary condition of the school. Blanks for this purpose are furnished him.

ART. 19. The mayors of all arrondissements prepare summaries of the various individual reports, and submit to higher authority all those propositions and suggestions which seem of special importance. Propositions which are of a more general nature, and not very pressing, are referred to medical committees for deliberation and subsequent report. In case an epidemic breaks out, the mayor has the right, upon motion of the school physician, to close a school; but he is obliged to give notice of his action to the school inspector and his own superiors.

ART. 20. The mayor is required to report regularly every three months to his higher authority (the prefect of the department) concerning the sanitary and medical condition of the schools in the arrondissement. Semiannually he must send in a more elaborate report, containing suggestions for changes and improvements, such as are made by the physicians in their reports to him. Advice regarding changes and "adaptations" in buildings is equally welcome.

This supervision of the Paris elementary schools was, in 1889, performed by 128 physicians. The budget of the city for that year contained the sum of 100,800 francs for this institution. Medical supervision of schools in Paris has served as a model for similar arrangements in other French cities. By means of a ministerial order of November 14, 1879, the attention of all prefects was called to the instructions quoted above at length. But since then, through the school law of October, 30, 1886, as well as through ministerial decrees and orders dated November 18, 1887, medical and sanitary inspection has been made obligatory for all the schools, public and private.

A few years ago, the city council of Paris expressed the desire that with this institution of supervision be connected a free school dispensary. This suggestion is under advisement at present. These dispensaries, so it is intended, shall go further than the school physicians who are watching over the health of the children. These dispensaries shall take sick children and treat them in hospital wards, specially arranged for children, and provide them with medicine and surgical assistance.

As early as 1862, a few free dispensaries were in existence in Paris supported by charitable societies, notably the "Société philanthropique." These dispensaries were connected with the hospitals for children, but there is a difference between institutions founded and maintained by charity and those by law. In these private dispensaries children could not always have the desirable special treatment, medicine, shower baths, etc. To the city of Havre belongs the honor and credit of having founded the first public free dispensary for children. This institution is equipped with all the most desirable conveniences and all necessary appliances. In 1875 a physician, Dr. Giebert, aided by contributions of charitable persons, established an institution of this kind which had astonishing results, and was subsequently made a city institution.

In Paris the first children's dispensary was opened in the first arrondissement upon urgent solicitation of Dr. Dubrisay and M. Baudof. It found a home in Jean Lantier street, No. 15, in a house which was offered by the owners free of charge. Since the date of opening, April 1, 1883, the consultations in this institution have reached the enormous number of 60,000; in the first year the number was 5,087, then steadily increasing, it reached 19,000 in 1889. The expenses during 1889 were 5,980 francs, but the annual donations amounted to 8,205 francs.

The example set by the first arrondissement soon found imitators. To-day (in 1890) eight arrondissements have children's dispensaries partly supported by private persons (like those in the thirteenth and fourteenth arrondissements), partly by the city. The excellent influence these few institutions have exerted has awakened the desire of increasing their number and to provide every ward of the city with one, hence a credit of 100,000 francs was opened for that purpose in the city budget of 1890, and all indications point toward an early fulfilment of the desire mentioned above, namely, that the medical and sanitary inspection of the schools be supplemented by a great number of free dispensaries in which children will find the treatment needed in cases of sickness. (After L. Fleischer.)

14.—MISCELLANEOUS NOTES.

Canada.—A new feature has been introduced into some Canadian public schools, this being what is called "*grade conventions.*" It is carried out by the teacher of one grade visiting the room of a teacher of the same grade and ob-

serving the work in the room during the afternoon. At the conclusion of the teaching, when the pupils are dismissed, the teachers and inspector hold a consultation to talk over any points of interest they have observed, with a view to improving the methods of teaching. Some of the benefits of these conventions are obvious. The teachers observe the points of excellence and the defects in the room they visit, and all are benefited by the experience and exchange of ideas. Besides, they bring about uniformity in teaching and management, which is an essential feature in graded schools, where pupils pass from one teacher to another. The similarity in teaching saves much time, as the pupils do not have to learn or be taught new methods when they enter another room. (Schoolm.)

Belgium.—The State Savings Bank, of Belgium, in its report of 1890 contains a few interesting points concerning the mooted question of savings banks. Belgium had in 1890, altogether, 7,637 elementary schools attended by 896,787 pupils (449,497 boys and 447,290 girls). In 4,965 schools the custom of collecting savings has been fostered. The pupils own 167,696 savings books (92,975 boys and 74,721 girls). Besides these there are 38,907 pupils whose savings are so small that they have not acquired their own bank book. The amount saved by the children in 1890 was $808,430 (of which the boys contributed $443,344, the girls $365,086), an increase of $24,296 over the previous year. The province of Hennegan has the greatest number of juvenile savers, while Limberg has the smallest. The teachers are generally opposed to the institution of school savings banks, and expressed this in unmistakable terms at their last annual meeting. At the general meeting of the elementary teachers in Brussels, the school savings bank has been condemned by a vote of 117 yeas and 86 nays, on the following grounds: (1) What is saved is never sufficient to provide aid in case of sickness or accidents. Insurance companies and workmen's unions would be much better. (2) Saving makes young children selfish; the teaching at school ought to develop charity, not grasping. (3) As it is, it is seldom the children that save—it is the parents, who give their savings to the children to take them to the schoolmaster, who thus becomes the banker for the parents. (4) Several parents save from a desire to please the schoolmaster. (5) The practical good of the school savings bank, after a trial of twenty-five years, may be said to be *nil*. (Different educ. journals.)

Austria.—The annual report concerning the school kitchens in Vienna during the winter of 1889 '90 shows that indigent pupils were provided with a good dinner (soup, vegetables, and bread). The number thus provided for was 2,869 a day; but the real number is much greater. Many pupils come with their little brothers and sisters, and the cook is told to help the older children, who thus "provide for the family" more plentifully. Often children come to school who are not enrolled and ask for a dinner which is never refused. In one hundred and thirty-two days 381,577 dinners have been served, but if the foregoing is considered the number is more than 400,000. Lately these kitchens can not supply all the children who come; poverty and starvation are spreading in Vienna. (Oestr. Schulbote.)

Egypt.—In the government schools of Egypt it has been the rule for years that, in addition to Arabic, every pupil must learn English or French at his option. This is not merely as a linguistic study, but is gradually being made the medium of instruction in the ordinary curriculum and in science. In 1889 only 14 per cent of the pupils chose English in preference to French, but last year the proportion rose to 23 per cent. In order to meet the increased desire to learn English, a normal school for native teachers has been opened, and it has 30 students. Also 6 young Egyptians have been sent to normal colleges in England to qualify themselves as teachers in the government schools. On the other hand, about 100 pupils are studying in France at the expense of, or recommended by, the Egyptian Government, and a Government normal school exists in Cairo under French management. Hence, it would appear that the French have the inside track in Egypt. (Lond. Jl. of Ed.)

England.—The money-lender and the betting man are never greater curses of their race than when their wiles entrap school boys who have expectations of coming into the possession of property when they are of age. The English legislators have, to some extent, restrained the evils in other places, but the circulars of the betting agent and money-lender seem to have found the way without hinderance into both public and private schools. Recently Lord Herschell brought the matter before the House of Lords; and archbishops and bishops, the lord chancellor and lords justice, dukes, earls, and other lords were absolutely unanimous in supporting the measure for rendering it penal to send out

such circulars to boys at school and youths at college. Lord Herschell in introducing the bill said its object was to render penal the sending of what were known as touting, betting circulars to boys at school and youths at college; and it proceeded upon the assumption, in this case quite justifiable, that the receivers at schools and colleges were prima facie persons who were infants and known to be such, leaving it to the sender to show that in any particular case the person to whom a circular was sent was not an infant. He added that if he received encouragement he should be prepared to extend the scope of the bill by including the sending of money-lending circulars. (Schoolm.)

Germany.—The school board of Berlin has ordered the purchase of an ample number of cuspidors for use in the schools. The committee on science and medicine had recommended this on the ground that tuberculosis (consumption) is transmitted through germs in the air, hence that the expectorations of sick children are apt to cause contagion if not confined to spittoons filled with water. The vessels are placed in every class room, on stair landings and corridors, and are attended to twice a day. (Allg. Dr Lztg.)

England.—In 1849 a royal commission investigated the accounts of the eight so-called public schools of England, namely: Eton, Harrow, Winchester, Rugby, Shrewsbury, Charterhouse, Westminster, Merchant Taylors. The report of this commission revealed the following facts: Column 1 states the income of the principals; column 2, that of the first assistants; column 3 states the amount it takes to keep a boy at these schools a year:

Eton	$20,000	$11,000	$750–$1,050
Harrow	20,000	6,975	712– 900
Winchester	15,000	7,000	545
Rugby	14,785	8,065	450– 600
Shrewsbury	10,000	2,812	500
Charterhouse	6,000	4,000	484
Westminster	5,850	3,150	475
Merchant Taylors	5,000	2,625	*a*50

a This signifies only the tuition fee per year. In all the other cases board and lodging are included. (Zeitschr für Geeundhpfe.)

Various alphabets.—The Sandwich Islands alphabet has 12 letters; the Burmese, 19; Italian, 20; Bengalese, 21; Hebrew, Syrian, Chaldee, and Samaritan, 22 each; French, 23; Greek, 24; Latin, 25; German, Dutch, and English, 26 each; Spanish and Sclavonic, 27 each; Arabic, 28; Persian and Coptic, 32; Georgian, 35; Armenian, 38; Russian, 41; Muscovite, 43; Sanskrit and Japanese, 50; Ethiopic and Tartarian have 202 each.

Germany.—School gardens, of which there are more than 9,000 in Austria, are being laid out in different parts of Germany. Their object is to give methodical instruction in the cultivation of fruit trees and to be used in the teaching of botany.

The minister of education has sent a notice to the provincial councils, requesting them not to refer candidates for positions as school superintendents to him, but themselves to take the initiative in recommending suitable persons to him. "It is of extreme importance," he writes, "for the proper development of education in elementary schools, that the responsible office of school superintendent should be only in the hands of especially trustworthy men, those who have proved themselves to be efficient elementary schoolmasters. This applies equally to masters who have enjoyed a university education. I expect that the local authorities will not restrict themselves to an examination of those candidates who present themselves for election, but will, without regard to expected vacancies, keep themselves conscientiously informed of specially suitable candidates. The school inspections, and an understanding with the provincial school board, will offer ample opportunity to discover such persons." (Lond. Jl. of Ed.)

How to treat stutterers.—Dr. Schellenberg, in Wiesbaden, gives the following advice to teachers as to how to treat stutterers:

(1) Treat the stutterer most kindly, and try to win his entire confidence. (2) Prevent other children from making fun of his trouble, and if necessary punish them for it. (3) Infuse him with courage and self-reliance. (4) During the first few weeks of school ask him no questions in recitation; then begin with such easy questions that he can answer without reflection and hesitation. (5) Direct your attention away from the stutterer as soon as he betrays confusion and disquietude in his attempt at speaking; repeat your question when he has regained

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composure. (6) Urge him to assume a straight posture when speaking. (7) See to it that while speaking he breathes through the mouth, not through the nose, and that he takes a deep breath when he comes to a period or other convenient full stop. He should also take breath before he attempts to answer a question. (8) Advise him to begin his speech slowly and in a lower pitch than usual. (9) If the first word of his sentence begins with a vowel, let him begin that vowel faintly and increase it in strength thus, A—sia. If the word begins with a consonant, let him blur over it to reach the vowel, dwell on that, and then go on thus, ba—thing. (10) The stutterer must learn to run his words into one another so that no hiatus occurs, which would, of course, facilitate or cause stuttering. He should at first speak thus: "A—ll'swellthatendswell," until he has to some extent mastered his infirmity.

These points are exceptionally well taken, and the present writer can confirm them, since he has found them of excellent use in the school room. The English language does not breed so many stutterers as the German, but there are still cases enough in our schools to make advice like the foregoing welcome to teachers of little experience, and of them, alas! we have more than is desirable. (Allg. D. Lztg.)

Saxony.—In the Kingdom of Saxony the lower schools have on an average 73 pupils to the teacher. The greatest number is found in inspection—District Loebau, namely, 95; then Chemnitz, with nearly 94; then Schwarzenberg, 92, and Marienberg, 91. The smallest number is found in Leipzig, where it is 43; in Dresden it is 44; other districts have respectively 67, 70, 71, 72, 73, and 74 pupils to the teacher. There are still 128 schools of three grades with but one teacher, and averaging 132 pupils. In 1,117 continuation schools (post-graduate courses of elementary schools) instruction is given all the year round; in 712 only during the winter. (Allg. D. Lztg.)

Germany.—The Society for the Promotion of Public Games for the young and for the people in Germany, which was founded in May in Berlin, has already begun to make itself felt. Committees have been formed under the direction of Dr. Eitner, of Görlitz, and Dr. Schmidt, of Bonn. The latter, who is also a member of the Committee of the German Gymnastic Society, announces that the latter society is ready to join in active coöperation for the promotion of health-giving games for the people. The minister of education, Graf Zedlitz, has expressed his heartiest sympathy in the aims of the society. In June, 1891, a course of instruction in public-school games was held in Görlitz for the benefit of the teachers. Dr. Eitner and Herr Jordan, the head teacher of gymnastics, conducted the classes, which were numerously attended.

Görlitz, a very progressive town in the province of Silesia, which was one of the first cities in Germany which introduced manual training, again comes to the front with normal courses for teachers in public games. Public play, supplementary to gymnastic exercises, has recently become an object of much attention of the Government as well as educational circles. (German Ed. Press.)

France.—Levasseur, the noted French statistician, makes the following statements concerning the population in France: France (or Gaul) had at the time of Cæsar 6,700,000 inhabitants, estimated according to the size and number of Gallic tribes. Roman Gaul during the time of the Antonines is said to have had 8,500,000, but this is a mere hypothesis. At the time of Charlemagne Gaul is said to have had only 5,500,000 inhabitants, according to Irmions Polyptique, but 8,000,000 or 9,000,000 according to an estimate made at the time. During the first half of the fourteenth century Gaul had 20,000,000 or 22,000,000, estimated by means of the number of hearths. At the end of the sixteenth century Froumenteau credited Gaul with 20,000,000 inhabitants. In 1700 the number is said to have been 21,136,000, estimated in the "Memoirs of an administrative officer." In 1715 the estimate was 18,000,000. Numerous positive statements go to show that in 1770 the number of inhabitants was 24,500,000, and in the great memorable year of the revolution, 1789, it was stated to be 26,000,000. In 1801 a rectified census proved the inhabitants of France to be 27,347,800; in 1866, 38,067,064 (with Alsace-Lorraine); in 1872, 36,102,921 (without Alsace-Lorraine), and in 1886, 37,930,759.

Germany.—Recently statistics have been published concerning suicides of children in Prussia. The *Neue Freie Presse* of Vienna on May 26 published a statement which permits a comparison between Prussia and Italy. Since in population the two countries are nearly alike, a comparison seems just. The cases mentioned are all committed by children below 15 years of age.

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Causes of suicides.	Boys in—		Girls in—	
	Prussia, 1869-'72.	Italy 1868-'77.	Prussia, 1869-'72.	Italy 1868-'77.
Insanity	117	138	91	300
Illness			45	
Being tired of life	25	28		
Passion	24			200
Home trouble	67	250	45	300
Financial losses	8	28	91	
Shame, fear of punishment	300		409	
Other causes	435	528	319	200
Vice	8	28		

Notice that in Prussia shame, fear of punishment, drives children to commit suicide, while in Italy the strongest motive is family or home trouble. The figures for Italy appear to be somewhat unreliable. The last column, particularly, looks suspiciously regular.

15.—Museums in School.

France.—In the year 1888, at the general teachers' meeting in Frankfurt-am-Main, a speaker claimed that every school should have its own local museum, in which should be kept not only the tools of all the trades and industries, but also the raw material necessary for those trades, as well as the finished products in their development from the smallest and simplest beginnings to their completion. This demand, made in all earnest, has been recognized as just in France for some years, at least partly. The school museums in that country (called local museums) form an indispensable means for object lessons. Their establishment was an unavoidable consequence of universal application of objective teaching, which had been advocated by such men as Montaigne, Rabelais, Fenelon, and Rousseau and others, especially after the great revival of popular elementary instruction (since 1871). Men of science and educational leaders were eloquent in advocating the teaching of visible things and processes in preference to empty words.

The French school museums contain natural and art productions which are suitable for offering clear concepts of things surrounding the child. All these objects are systematically and methodically arranged, and adapted to each grade of school. It is most instructive to learn the history of these museums. Their beginning dates back to the year 1867. At the "World's Exposition" in Paris a few collections of objects were exhibited and Madame Pape-Carpentier gave lectures in which she dwelt on the good use to which these collections might be put in schools. This suggestion fell upon fertile soil, and when in 1873 M. Buisson reported upon the Vienna Exposition he could already state, that France was not behind other countries in matters of school museums, and that some provinces (departments) possessed more than a hundred of them filled with agricultural and industrial objects. Their number has increased rapidly. It is noteworthy that most of them had their origin in the initiative of the teachers who began, aided by their pupils, to collect models and natural objects, and arrange them systematically. In 1890 France had over 14,000 school museums, which are to be distinguished from simple collections of beetles, mineral and the like, such as may be found in almost any school where natural history is the hobby of the teacher.

Legal provisions for the establishment of school museums are not in existence in France. It was not a question of introducing a new branch of study or a new method of teaching, but simply a question of procuring the means for teaching object lessons. The authorities merely issued some suggestions for managing the instructions and exhibited a lively interest in them. A new impetus was given the idea of school museums through the report of M. Buisson, mentioned above, in which the various collections for school purposes exhibited in Vienna were minutely described. This report did much to awaken interest among local authorities, so that a few years later—in 1882—all the inspectors (superintendents) reporting on the schools of their districts and provinces were unanimous in acknowledging the usefulness of these collections for elementary school instruction.

Through public lectures to teachers on the subject of objective teaching, M. Buisson, in 1878, succeeded in awakening great enthusiasm among teachers. On

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returning home they resolved to follow the example set and establish museums. Soon after there was scarcely a province of France (department) in which teachers did not from the rostrum and through the press agitate the introduction of object lessons and school museums.

Most of the museums were established by teachers and pupils themselves, who bore the expense; hence material aid on the part of the state was not necessary. Some communities defrayed the cost of original establishment, others brought collections offered by private citizens. All were agreed upon the principle that instruction in things without having the things to show is irrational, and that both in the kindergarten and primary school the same method of object lessons should be followed which a mother applies in order to create ideas, namely, by means of objects and not words. The child must be led to know the objects within its vicinity distinctly. This is best accomplished by means of the intuitive method for whose application the reading lesson offers the best opportunity. During a reading lesson a great variety of objects are mentioned, and if they can be given into the children's hands attention is secured, the mind is being sharpened, the power of judgment developed; in short, the child is accustomed to distinct seeing and clear comprehension. The teacher is enabled to abridge verbal explanations where he has objects to show; he can thereby make his lessons more interesting, banish the ghost of indifference from his class room and keep alive the joy in work. After the children have left school they are not apt to lose the desire to observe, to reflect, and to judge. If the school museum had no other result than this that one alone would justify its establishment and maintenance. A school museum offers no little advantage also to the study of language; the child learns to express its ideas better; its vocabulary is increased more rapidly; it replies more fluently when it sees and handles things, and it certainly remembers technical terms more easily than in the utter absence of objects.

Experience has shown all this in schools where museums are kept, while in schools which are without museums the teachers have great difficulty in accustoming their pupils to a clear and distinct expression and flow of thought. It is generally considered best to have the museums established by the pupils themselves under the guidance of their teachers, aided by friends of popular education outside of the school. Care must be taken to proceed methodically, for it is not a question of preparing for exhibition some apparatus or objects of luxury or "curios," which must not be touched from fear of breaking or injuring them. The museum should contain those objects which illustrate the teacher's instruction; objects should be selected which cost little or nothing and may easily be procured by the pupils. The more the pupils participate in gathering the objects to be placed in the museum, the more intense will be the interest in the lessons, for every one wishes to view the objects his comrade has contributed. If these suggestions are followed the museum will be made by the school, for the school. It was a wise remark of M. Buisson when he said: "The great advantage of a school museum is, not in having it, but in making it."

In order that the objects brought to school be safely placed where they are protected from dust and remain visible and easily accessible, a good-sized cupboard with glass doors is recommended. In case the school authorities refuse to procure it, an appeal is made to a friend of the school, or to some wealthy parents of pupils. Such an appeal is rarely made in vain in France. In most schools a cupboard is used large enough to accommodate the juvenile library of the schools, as well as the museum of objects.

At first mistakes were made in getting school museums. Some teachers went too far in their zeal by collecting objects which stand in no relation to elementary instruction. Others, not intending to be surpassed, bought and procured more or less complete collections, instead of letting their pupils bring the objects as they were needed. It is evident that the true purpose aimed at was missed. Large museums which dazzle the eye of the children are injurious rather than useful in school; for since the children do not know all the objects exhibited they care little for them, and interest turns into indifference. Costly museums in which the "wonderful objects on exhibition" bear the label "Hands off!" are not in their proper place in the elementary school, which is to be a workshop for mental work. Neither will ready-made collections suffice; they serve for decoration more than for actual study.

However, these mistakes were soon rectified. The teachers now proceed methodically, generally classifying the objects according to the natural kingdoms. In Havre, one of the most progressive cities in France in educational affairs, another classification has been adopted. The school museums in that city are

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divided into: (1) Objects of food; (2) objects of clothing; (3) objects pertaining to the dwelling; (4) miscellaneous objects. Each group has a number of divisions. This classification has recently been adopted by other schools, because it seemed more practical and suitable than the other, affording an easier finding of objects and also an easier cataloguing.

It goes without saying that the teacher is the chief custodian. He must not refuse a single object, in order not to hurt the feelings of his pupils. He must urge them all to bring objects for exhibition, so that they are able to say "our museum," not "the museum."

A chief characteristic of the school museum is that it is never complete. The pupils must know that there is always something missing. When, during geography lesson, for instance, it should be said, "Such and such a thing is needed to fill a vacancy in the museum," the pupils either individually or collectively procure it. Thus the museum remains an object of interest. Of course, every object found worthy of preservation is to be described, numbered, labeled, and placed in its proper compartment. The name of the donor may be attached, and this naturally incites further efforts. Many objects are collected during excursions which the teacher makes with his school into the country and the mountains, through factories, along wharves, and through parks. Thus it becomes possible to gather in these school museums all the objects illustrating the natural and artificial products of the town or village in which the school is situated. Commerce, various industries, agriculture, forestry, all are represented.

The law of July 27, 1882, prescribes for the elementary schools, "instruction in the elements of agriculture, horticulture, physics, and natural history." Though the mere rudiments is all that can be expected, the study of physics requires some apparatus. Some normal schools induce their students to get practice in making such apparatus themselves in their school workshops and then allow them to take these objects with them, if they are appointed to a teachership, to use them as a ground stock at their collection of apparatus. In the Grenoble Normal School every student is required to make a certain number of objects for illustrating the study of physics. The State pays for the material about 10 francs (or $2) per student.

To the legitimate contents of a good school museum belong pictures, charts, photographs, etc., for they aid instruction essentially. Generally, pictorial illustrations play an important rôle in French school instruction. Recently magic lanterns (solar and calcium light cameras) are used, owing to the active work of the "Society for Promotion of Object Lessons." These cameras are sold at very reasonable prices.

If the museums are thus provided with all the necessary and useful objects, selected according to pedagogical principles and local circumstances, an agricultural population will have a different collection in its schools from that of an industrial population, and a girls' school is apt to have a different collection from a boys' school. It goes without saying that the institution will be a prolific source of incentive to study.

The idea of school museums is not a new one. It was first carried out in Germany, but at present France has left Germany far behind in fostering and supporting the institutions. Victor Cousin once said: "The true greatness of a nation does not consist in not imitating others, but on the contrary, in borrowing good ideas from them and adapting them to the existing conditions of the culture at home." (After L. Fleischer.)

16.—National School Systems.

Argentine Republic.—When the Argentines freed themselves in 1810 from the yoke under which they had bowed for three centuries there was practically no education in the Republic. There certainly was a somewhat decayed university (for Spaniards and Indians) founded in 1622 at Cordoba, but its influence was as valueless as its work. The early history of the Republic was hardly favorable to the establishment of a regular educational system, but the clouds were gradually clearing away; and from the promulgation of the constitution of 1853, which received its final form in 1860, the progress of public instruction, until the temporary financial disturbances of a year ago, has been uninterrupted. There are 2 universities, Cordoba and Buenos Ayres (1821), 15 secondary schools, 35 normal schools, 2,396 primary schools, and 831 private schools. Primary instruction is free and obligatory for all children between the ages of 6 and 14 years of ages. Urban districts of between 1,000 and 1,500 inhabitants and rural districts of from

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300 to 500 have a right to a public school. If the obligations laid upon the community by the state are satisfied by existing private schools, or by an individual family, there is no compulsion to attend the public schools. In such cases the progress of the children is regularly tested by the state by means of periodical examinations. If found unsatisfactory the aid of the law is invoked.

Besides the usual subjects of instruction in primary schools, it is worth noting that the Argentine curriculum involves instruction in morals and manners, hygiene, the duties of the citizen, and gymnastics. Girls are taught domestic economy and manual work; in the country lessons are given in agriculture. If a minimum of 15 parents claim religious instruction for their children the law authorizes the engagement of ministers of the different creeds for this purpose, the teaching to take place of the school hours. But the claim has never been advanced, so it may be said that instruction in the Republic is wholly secular. The administration of the schools is in the hands of a national council, guided by the minister of public instruction. Each province has a council with limited powers and each district a school council, generally composed of teachers, professors, and local dignitaries, the latter being appointed by the national council.

Hygienic inspection is undertaken by a body of doctors, under the direction of the Government. The teachers are as a rule trained in the normal schools; no one is allowed to teach in the public schools without the normal diploma, or if a foreigner without satisfying the authorities of the normal school as to his or her abilities, and in addition passing an examination in pedagogy. The teachers are allowed to retire after twenty years' service on their full pay at date of retirement; with three-quarters of their pay after fifteen years, and with half pay after ten years' service, or after accident or injury suffered in the service of the state. There is no corporal punishment. The hours are from 11 in the morning to 4 in the afternoon, broken by four periods of from ten to fifteen minutes each. The classes are not allowed to be larger than forty. Women are preferred to men as teachers, and where the schools are mixed there are only women employed; the head of the boys' schools is always a man, but most of the teachers are women. In 1888 there were 825 teachers—616 women and 209 men—employed in the capital alone. So much for primary instruction.

The oldest of the fifteen "national colleges," or secondary schools, was founded more than two hundred years ago; that of La Plata was founded in 1884. The secondary schools are under the immediate control of the minister, who appoints the principals and arranges the curricula. The principals only teach from four to eight hours a week, and after ten years' service may retire with half, after fifteen with two-thirds, and after twenty-seven with the whole of their pay as pensions. The boys on entry must have passed through the highest classes of the primary schools, or an equivalent, and on leaving they pass the baccalaurate examination; the whole course professes to be a complete preparation for the university. No Greek is taught, Latin is the subject of much dispute, and the whole level of the instruction given is very low. State scholarships have been suppressed, but a private association has founded eighty. There are 2,626 pupils at the schools, 927 of whom are at Buenos Ayres. In the capital there is a large foreign element in the faculties employed in secondary schools. The administration of the schools is in the hands of the national council, assisted by three superintendents.

The plan upon which the two universities are organized is uniform; there are only three faculties—law and social science, medicine, and physical and natural sciences. There is, however, a distinct feeling in favor of the establishment of a faculty of letters. The age of entry is 18, and the course is one of six years. Women are allowed to attend lectures in the faculty of medicine—one, in fact, recently took her M. D. with honors. (Lond. Jl. of Ed.)

Austria.—The latest data concerning the Austrian elementary schools are published by the Austrian statistical bureau. Austria had, in 1890, 3,335,674 pupils of school age (6 to 14 years); of these 21,895 could not attend school owing to mental or physical incapacity, while 365,593 normally endowed children were successfully withheld from being enrolled in school. The enforcement of the compulsory-attendance law made 185,464 judicial actions necessary; of these 68,590 were sentences imposing imprisonment of a few hours or days, while 116,874 imposed fines. Eighty-eight per cent of all lower schools in Austria proper, that is, the western half of Austria-Hungary, are for both sexes; 6.8 per cent were for boys only; 5.2 per cent for girls only; 12,465 schools were open all day; 3,210 were half-day schools, and 1,239 were partly half and partly whole-day schools. The number of male teachers was 44,838; that of female teachers, 13,913. The average number of pupils to the teacher was 72½. Eighty-three and

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seven-tenths of the teachers were normal graduates, 11 per cent had only a diploma, and 5.3 per cent had not yet acquired their diploma. Of the 16,688 elementary schools more than one-half, or 8,400, were ungraded, 3,916 were divided into classes of two grades, and the rest up to six, seven, and eight grades.

Belgium.—The School Guardian (English), says of Belgian primary schools: "The buildings are two stories high, having a gallery on the first floor running round the quadrangle. Each class has its own separate room, lofty, well lighted, and ventilated, but only from one side. The furniture consists of small tables and benches, each sufficient for two or three scholars, and all facing the slightly raised platform for the teacher's desk. The tables have slates fixed horizontally in them. Blackboards are carried around the walls with compartments for the use of each scholar, on which he copies with chalk the sums or geometrical figures or sentences dictated to the class. This is done with a view to enabling the master or mistress to see at a glance the work of each without having to pass round the room. In this way, too, the children have the advantage of a change of posture and find relief from the monotony of the lesson. The teaching is in all cases simultaneous. As no reading is taught in the 'Jardins d'Enfants' or Infants' Schools, the lowest classes have to learn the letters and their simplest combinations. These they enunciate together, and great pains are taken to make them give each letter and syllable its full and correct sound. Writing is learned from a copy set on the blackboard. A round, vertical hand is taught without any distinction between the up and down strokes. Elementary drawing is obligatory in all the primary schools, and is taught by the ordinary teachers, who have no difficulty in teaching it, having practiced it in the normal schools as well as previously in their own school days. Some ordinary object is put before the class or drawn on the blackboard * * * ."

Bolivia.—Bolivia has four universities. The following figures are given for 1888: Primary schools, 506, with 707 teachers, and 24,583 pupils, of whom 8,822 are girls: secondary schools and colleges, 22, with 2,234 pupils; 774 students of law, medicine, and theology, with 55 professors in the universities. The Government's contribution to public primary schools in 1888 was 43,900 bolivianos.

Bulgaria.—In 1890 Bulgaria had 3,844 elementary schools, with 129,777 boys, and 42,206 girls as pupils. The total number of boys of school age is 275,756; of girls, 261,968. For education the state grants a yearly subvention of 2,000,000 lev. Education is free and nominally obligatory for a period of four years. About 81 per cent of the population can not read or write. There is a university at Sofia, with gymnasia in the principal towns, including four for girls, besides several lower middle-class schools. There is a free public library at Sofia. (Statesman's Yearbook.)

Ceylon.—The Buddists of Ceylon have taken a new departure. Hitherto their energy had been directed towards the welfare of the boys, for whom no less than forty schools had been opened within recent years under the auspices of the Theosophical Society. But it had been long ago pointed out by Col. Olcott that the Sinhalese girls should have a school of their own, where they might be brought up in harmony with their religious and national instincts. This idea was zealously worked out by a devoted Buddhist lady, Mrs. Weerakoon, and a band of her countrywomen, who, with praiseworthy activity, organized the Woman's Educational Society, now numbering over 1,800 members. Within one year this society opened four girls' schools—the Blavatsky school at Wellewatte, with about 100 children in daily attendance, and the girls' schools at Kandy, Gampola, and Panedura. (Lond. Ed. Times.)

China.—Education of a certain type is very general, but still there are vast masses of adult countrymen in China who can neither read nor write. There is a special literary, or lettered class who alone know the literature of their country, to the study of which they devote their lives. Yearly examinations are held for literary degrees and honors, which are necessary as a passport to the public service; and in 1887, for the first time, mathematics was admitted with the Chinese classics among subjects of the examinations. Recently, Western literature and works of science have been introduced in translations, and schools for the propagation of Western science and literature are continually on the increase. The principal educational institution for the purpose is the "Tung Wen Kwan," or College of Foreign Knowledge at Peking, a Government institution, where the English, French, German and Russian languages, and mathematics, astronomy, meteorology, chemistry, natural history, physiology, anatomy, and Western literature are taught by European and American professors, while the Chinese education of the pupils is intrusted to Chinese teachers. There are besides several colleges under the control of some of the numerous

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Roman Catholic and Protestant missionary bodies at Shanghai and other parts where the English languages and lower branches of Western science only for the subjects of study. The Chinese Government has of late years established naval and military colleges and torpedo schools in connection with the different arsenals at Tientsin, Shanghai and Foochow in which foreign instructors are engaged to teach such young Chinese as intend to make their career in the army and navy off their country, Western modes of warfare, beside Western languages and literature. The Chinese newspapers have for several years flourished at Shanghai, and the success they have achieved has led to the establishment of others at some of the other treaty ports. (Statesman's Yearbook.)

Colombia.—In Colombia the religion of the nation is Roman Catholicism, other forms of religion being permitted, so long as their exercises are "not contrary to Christian morals, nor to the law." There are two universities and numerous colleges and special technical schools in the Republic. In 1839 there were 14 normal schools with 393 students, and 1,734 primary schools with 92,794 pupils. Primary education is gratuitous but not compulsory.

Costa Rica.—Education in Costa Rica is compulsory and free. In 1890 there were 300 primary schools with 15,000 pupils, besides 90 private schools with 2,500 pupils. In 1884 the number of children between 7 and 14 years of age was 27,245. In the budget for 1889–'90, $350,000 were devoted to education.

Denmark.—Elementary education is widely diffused in Denmark, the attendance at school being obligatory from the age of 7 to 14. Education is afforded gratuitously in the public schools to children whose parents can not afford to pay for their teaching. The University of Copenhagen has about 1,300 students. Connected with the university is a polytechnic institution with 20 teachers and 200 students. Between the university and the elementary schools there are 13 public gymnasia or high schools, in the principal towns in the Kingdom, which afford a "classical" education, and 27 modern high schools. There are five teachers' training colleges. Instruction at the public expense is given in parochial schools spread all over the country, to the number, according to the latest official statistics, of 2,940, namely, 28 in Copenhagen, 132 in the towns of Denmark, and 2,780 in the rural districts; with 231,940 pupils in all, or 123 per thousand of population. (Statesman's Yearbook.)

Egypt.—In a recent work on Egyptian education ("L'Instruction Publique en Egypte," by Yacoub Artin Pacha) is the following account of education that is pursued by the Egyptians—in fact, the education which has been in vogue with them for many centuries:

Reading and writing are the first steps taken by the child, who is at the same time set to learn a portion of the Koran by heart. As soon as he knows his letters and can read syllables he reads and writes the part of the "Koran" committed to memory, and so on, until the Holy Book is finished, a task generally taking 2 or 3 years. These exercises of the memory are carefully graduated according to the child's age and ability. Then comes the study of grammar, the rules being set in rhyme, a plan for facilitating the work of the pupil not confined to the Mussulman world. The study of grammar, logic, rhetoric, etc., takes 3 or 4 years. Then follow 8 or 10 years of commentaries on the "Koran," and after this period is completed the boy, who began at 6 or 8, is now, at 20 or 22, a full-blown *mondarris* (professor) or *cheikh* (doctor). Most children leave school at 10 or 12 to take up a trade; those who are intended for a profession or for business leave after the grammar course; only a few remain to pursue the higher course in religion and law. Of the latter some become *kadi* (judges) or *mufti* (lawyers); the rest become teachers. The ideal of the founders of the universities had been to preserve the language of the elect, the language of the "Koran."

Arabic was reserved as the language of religion, tradition, and law. Beyond these three subjects all other instruction was intrusted to foreigners, with the single exception of mathematics, which was in the hands of the Copts, who had distinguished themselves from early times as financiers. Mehemet Ali was the first to attempt to introduce European method into Egyptian pedagogy. In 1816 he sent a body of young Mamelukes to England and Italy to learn engineering, etc., and in 1825 he founded a school of medicine, restricted to Egyptian students. From 1826 to 1834 large numbers of young men were sent to France to complete their studies; and to the general spread of European culture, resulting from these wise measures of Mehemet Ali, Egypt owes her 50 primary and secondary and her 16 technical schools. A council of public instruction was instituted in 1836, but for 30 years the conservative influence of El Azhar was too strong, and progress was infinitesimal. Ismail Pacha undertook a general reorganization

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of the educational system of the country, and founded schools of law, language, science, and art, and a normal school. Since 1885 progress has been as rapid as could be expected, as will be seen from the tables at the end of this volume.

A *modus vivendi* has been established between the state schools and the university and the divergence between the two systems is being gradually narrowed down. Artin Pacha looks forward, "patient in his impatience," to see the seed sown by the great political and intellectual regenerator of Egypt bearing its fruits; nor does he hesitate to express his belief that the "ancient and illustrious university mosque of El Azhar, animated by the scientific spirit which is urging us forward, will take its place by the side of its younger and more justly celebrated sisters, the universities of modern Europe, who have outstripped us in the past." The education of women is: First, religion, given by *chiekhs* or women teachers; and, second, domestic, *i. e.*, teaching, housekeeping, manners, embroidery, singing, and so on. Dancing, of course, is not a custom of respectable orientals. The age at which girls are married, viz, between 12 and 16, is a serious impediment to a complete system of instruction. Curiously enough, even the limited instruction given at present is partly due to the establishment of a midwifery school in 1836; the sages femmes were the partially innocent cause of the creation of a thirst for knowledge; at any rate they taught the elementary principles of hygiene in countless native families and this widening of the horizon was productive of immediate good.

France.—M. Antoine Albalat, in an article in the *Nouvelle Revue*, draws a most harrowing picture of the results of the purely theoretical educational system, which, until a few years ago, was looked upon as a panacea of all evils. France, nowadays, he says, is nothing but a large civil-service employment agency. And the struggle for life with us means the race for government and other posts. Thanks to political equality and free education, which have reduced all to a dead level, the French nation, once so fertile in ideas and so original, threatens to become nothing but a nation of civil servants and pedagogues. Just count the number of place seekers! The prefect of the department of the Seine published a few months ago the following list of vacancies and applicants in that department: Junior clerks, 4 vacancies, 4,398 applicants; male teachers, 42 vacancies, 7,139 applicants; drawing masters, 3 vacancies, 147 applicants; custom-house clerks, 165 vacancies, 2,773 applicants; surveyors, 1 vacancy, 1,338 applicants. The civil service, the post-office, the telegraph office, and the schools have all greatly increased their teaching force, and they are at present the bane of our country. France may be roughly divided into those who hold positions and those who seek them. The vast majority of Frenchmen have only one dream, to be kept by the state, to live on the public taxes. Parents have no other ambition for their children—the civil servant, the young man who draws Government pay, is their ideal son-in-law.

Even the sons of the soil are streaming into the towns, be it only to sit behind the pay desk. But the women are more to be pitied. In default of marriage, they are seeking work, especially as teachers. But how soon they are undeceived! Read the bitter plaints with which they continually fill the ears of the minister of education. The state promised them a peaceable, respectable life, with a secure income; and thousands of them are without positions, on the verge of despair, and fall an easy prey to temptation. No one will ever know the number of these victims of arithmetic and French history that are swallowed up by the great gulf of vice. "I know nothing more sad than this," exclaims M. Albalat. Here is the result of our theoretical, Utopian, and modern education! We talk of a fourth estate. There is a fifth estate, namely, the women who have to earn their living by their brains. (Lond. Jl. of Ed.)

Germany.—Prof. Weber, of Steglitz, near Berlin, who acted for some time as assistant principal in English schools, answers the question: "Do English schools deserve to be considered models for German schools?" in the negative.

"Any observant foreigner who has lived in England," says he, "even if only for a short time, must have been struck with the great self-consciousness of the Englishman, which quality is already developed to a high degree in the little boy. The Englishman is proud of the language of his country, of its riches, and of its institutions. As a consequence it is a common fault with him to depreciate other nations and to overrate himself and his own people. To this national self-reliance he adds a great love of individual liberty and self-dependence. He will not under any circumstances be deprived of them, either by the state or by the church, and he hates all bureaucratic ways, or, as he calls it, 'red-tape business.' Then he possesses a profound respect for the law and for the existing institutions of the state, as well as in general a true sense of religion, which sense is

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greatly fostered and enhanced by his family life. Moreover, we find in the Englishman the singular inclination to ask first of all in everything he undertakes: 'Of what use is it?' 'Englishmen can not take anything easy,' says Karl Hildebrand in 'Briefe aus England,' 'neither can they take anything idealistically. They transpose everything at once into the practical. English idealism is always practical, in contradistinction to the German, which manifests itself in artistic contemplation.' To this practical sense the English partly owe their supremacy upon the seas, and we Germans, who but a short time since began to acquire colonies, may learn very much in this respect from the practical Englishman.

"These different peculiarities of the English character are distinctly expressed in the English schools; they exert a mutual influence upon each other and are mutually dependent upon one another.

"As the whole life of the Englishman is chiefly based on the principle of utility, so also in his school life he places this principle in the first rank.

"The average Englishman does not, as a rule, strive after knowledge if he does not see his way to make practical use of it; in other words, he does not pursue knowledge for her own sake. This principle is very dangerous and pernicious to the intellectual progress of a people, and it is not to be wondered that a notion or a true idea of the elements of science is unknown to the great masses.

"'For the language, literature, and the history of other nations,' Mr Brennecke rightly says, 'for efforts in art which adorn and cheer the inner life, the average Englishman, deducting, of course, amateurs, the upper 10,000, and specialists, have no time in life,' because, I add, he does not understand nor appreciate them. We Germans are, however, only too easily inclined to lay too much stress upon the scientific side of things, and in so doing to forget often the practical use of the results we obtain.

"The English system cares little about the acquirement of manifold knowledge by the pupils and the scientific treatment of the subjects, but it tries, before all, to fulfill two tasks: Firstly, to develop the physique of the pupil, to make him in all respects healthy and capable of resistance, and to harden him against physical and moral injury. This having been accomplished, the teacher's aim is to develop in the vigorous body an independent, firm character; he will accustom the boys to absolute truth, candor, and resoluteness; they must quickly and independently find the right thing and learn to execute. In a word, the English master educates; the German rather instructs.

"A great difference between English and German school arrangements consists in this: The English Government pays no attention to the higher and middle schools. An organization and superintendence of the schools by the state, as in Germany, does not exist; these schools are either a private commercial speculation or they have been founded by old and often very rich endowments or by corporations. The Englishman is far too independent to allow the state the right of prescribing for him the education of his children. But there are already reasonable Englishmen enough who believe that a firm organization of all schools by the state can do more for education in general than the doubtful trade of private schools, and they demand the same institution as in Germany. In Scotland state superintendence was introduced in 1885.

"Thus the state can give no prerogatives to schools, and that at least is very good, for the prerogatives given to our schools do a great deal of harm in hindering their free development.

"I will not, however, forget to mention that a certain supervision of schools is exercised in England by the press and literature, and the power of the press over the masses is much greater in England than with us.

"A certain uniformity in scholastic matters between the more superior public and even private schools is to be seen in the local examinations, which are held annually by the universities.

"Some secondary schools also submit voluntarily every year to regular examinations, for their own credit's sake, 'so as to give the world confidence in them.' But in comparison to a firm organization these examinations can be but a miserable makeshift. Mr. Raydt informs us that for some time there have been held regular meetings of school principals, which might, indeed, have a good influence upon the formation of a uniform plan of teaching; but why are the debates of these meetings not published, as in Prussia? By these means they would become of common service to every teacher. In this regard I can not sufficiently praise the reports of the school inspectors on the elementary schools inspected by them in their districts. These reports are printed in the Parliamentary papers and contain many interesting and useful points.

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'It is the German elementary school work by which the English should learn how salutary is the supervision of schools by the state, and how they should especially reform their middle-class or secondary schools."

Guatemala.—Primary education in Guatemala is obligatory, maintained by the state, free and secular. The sum spent on education in 1887-'88 (ending June 30) was $525,625, of which $253,927 were for primary education. In 1887 there were 93,627 children of school age. At the end of 1889 there were, according to official statements, 1,327 primary schools of all kinds, attended by 47,907 pupils, and 66 higher schools, with 3,677 pupils. There were in addition 7 high and normal schools, with 1,185 pupils (315 females).

Montenegro.—Schools for elementary education in Montenegro are supported by Government; education is compulsory and free; there are (1889) 70 elementary schools, with 3,000 male and 300 female pupils. All males under the age of 25 years are supposed to be able to read and write. There is a theological seminary and a gymnasium or college for boys at Cettinje, and a girls' high school maintained at the charge of the Empress of Russia.

Hawaii.—The Kingdom of Hawaii (comprising eight large productive and thirteen small desolate islands), with 80,000 inhabitants, is of special importance for commercial intercourse between North America and East Asia. It is well known that the recently deceased King Kalakaua, in 1881, made an extensive tour through America and Europe. European institutions and therewith Christianity were introduced in Hawaii at the beginning of our century and special attention was given to education. The United States exert the greatest influence upon the administration of this Kingdom and covertly aim at the protectorate over the Kingdom. Its annexation on the part of the United States is only a question of time.

From the main island public education was diffused over the whole Kingdom in a comparatively short time. At the beginning of the second decade of our century the chieftain and his most distinguished subjects diligently studied reading and writing. This awakened everywhere the desire to learn these wonderful arts. The most able men among the adult students were sent as teachers to all parts of the country, and the throng to their schools was so great that in 1827 there were 52,000 persons studying in 900 schools, or more than half the number of the inhabitants were eagerly engaged in acquiring the elements of learning. In 1832 the number of natives who could read amounted to 32,000, of whom nearly all were also able to write. At present there is in operation in Lahainaluna a normal school for the training of preachers and teachers, who alternately devote themselves to intellectual and physical work, as the students earn their living by the tilling of a farm belonging to the institution. Manual work takes a prominent place in all schools of the little Kingdom. Education is obligatory for both sexes from 6 to 15 years of age (formerly 4 to 14). A peculiar feature is the regulation in force that anybody who can not read or write is prohibited from obtaining public office and also forbidden to marry.

The Kingdom is divided into twenty-three school districts, each of which is under the supervision of an inspector. This official superintends the management of the schools, both the instruction and the buildings and sites. He is required to furnish quarterly a report to the central authority. The school year has forty-one school weeks. The daily sessions are from 9 to 2 o'clock, with one or two intermissions. Sunday and Saturday are holidays. There are different classes of schools:

1. Primary schools (common schools), where the entire instruction is given in the Hawaiian language.
2. English schools, where the English language is the means of instruction.
3. Private schools, in which both languages are used.

The school at Lihue, on the island of Hawaii, in which German and English are taught, belongs to the third class and is attended by children of German workingmen only. For children of the aristocracy there is a kind of secondary school that took its name from the street in which it is situated, "Fort Street School." Protestant missionaries established near Honolulu, on the island of Qahu, the principal city of the country, the "Qahu College," after the pattern of French schools. Catholic missionaries also established schools whose textbooks are, with few exceptions, printed at Honolulu in the native language.

The direction of the entire educational system has been assigned to a "bureau" or "board," consisting of five members, of which three are natives who were educated in the country. The president, at present Mr. Bishop, was formerly secretary of the state department; previous to that, a member of the house of nobles and president of the legislative body. This bureau appoints the teachers and superintends the expenditure of the money appropriated by the representatives of the

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people. It nominates a general superintendent for the whole educational system, who visits each school of the country twice a year to examine the pupils and the condition of the school. He reports to the bureau or board. In order to fulfill his duties the general superintendent is obliged every year to travel 800 miles on horseback and 1,600 miles by water. During the school year 1888–89, there were in the Kingdom 179 schools, 63 primary, 69 English and 47 private schools, with 8,770 pupils (4,952 boys, 3,818 girls), with a teaching force of 334 members (177 men, 157 women). At the last exposition in Paris, in 1889, there was on exhibition pupils' work from Hawaii, nearly all of which was expressed in good English and in pleasing form.

The educational system in Hawaii furnishes proof of how much one can do if stimulated by earnestness of intention. Scarcely sixty years have passed since the first pioneers of public education commenced their work in Hawaii, and already its public school system can compare with that of Europe.

The state, however, has easy sailing because it has the schools, and no obstacles are raised by the church, since religious societies and the clergy are excluded from the management of school affairs. (Freie päd Blätter.)

Hungary.—Count Albion Casky, the minister of public instruction in Hungary, has recently issued in the German language a synopsis of his annual report, in which he says that he considers professional supervision and a thoroughly trained corps of teachers the most important factors of progress in any school system. So far as figures can speak, certainly Hungary has made rapid progress during the last twenty years. The report shows a comparison between the state of affairs in 1859 and 1889, from which we cull the following items:

I. *Elementary schools.*—In 1889, 2,015,612 children attended school, while in 1869 only 1,152,115. In comparison with the number of children of school age between 1869 and 1889, an increase of attendance from 50.42 per cent to 80.65 per cent is recorded. While in 1869 1,598 communities were without any schools, that number had decreased to 244 in 1889. The number of schools in 1869 was 13,798; in 1889 it was 16,702. In 1869 the number of teachers was 17,792, while in 1889 it had increased to 24,645. The expenditures for maintaining elementary schools in 1869 were only $1,342,363, but in 1889 they amounted to $5,396,777. While in 1869 the state's subvention to elementary schools was only $14,556, it was $6,505,315 in 1889. The great increase recorded above is found only in those portions of the Kingdom inhabited by people of the Hungarian, German, and Ruthenian tongues. The attendance of Roumanian, Servian, and Slavakish children is in a rather backward condition.

II. *Secondary schools.*—The Kingdom has 180 secondary schools; that is, 151 gymnasia, or classical colleges, and 29 realschulen, or modern colleges. One hundred and thirteen are complete in their organization, while sixty-seven had not quite completed their organization, lacking the senior classes. The classical schools were attended by 36,367 students, or 83.3 per cent; the modern by 7,303 students, or 16.7 per cent. The minister remarks that the attendance in modern schools is increasing faster than in the classical schools.

III. *Superior schools.*—Concerning universities, technical and other superior institutions, the minister reports that the candidates for the profession of teaching and students of technical, agricultural, and military schools are increasing in number faster than those of the universities. In the universities he notices that the law faculties and academies are still overcrowded, as in former years, while the number of candidates for theology, medicine, forestry, and mining is decreasing. An interesting feature of the superior education in Hungary is this: The examination for graduation must be exceptionally rigorous, for of 877 candidates for the legal profession only 521 (that is, 59½ per cent) passed the examination; of 297 medical students, only 207 (or 69 per cent); of 140 students of the philosophic faculty, only 38 (or 27 per cent); of 210 students of the Polytechnicum, only 80 (or 38 per cent) passed.

Italy.—A new school for Italy is now under the consideration of the council of public instruction, and its provisions are foreshadowed in the "New Educator" of Rome. It is proposed to transfer the charge of the infant schools from the minister of the interior to the minister of instruction, and the age of compulsory attendance is raised to twelve years. The appointment of teachers is left in the hands of the communal boards. Teachers under 21 years of age will only be provisionally appointed; on coming of age their status will be improved, and at the age of 24 they will be recognized as fully responsible teachers. Thenceforth they will be removable only for grave offenses specified in the bill; their dismissal will have to be approved by the provincial board of education, and an appeal to the minister will probably be allowed.

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School-inspector Gen. Pisani has recently published a book on the Italian schools which is designed to show what progress public education has made during recent years in Italy. The number of elementary pupils in 1889-90 was 2,102,615 (or 1,094,467 boys and 1,008,148 girls); this is an increase of 55,000 over the previous year. Of the sum total, 1,966,988 pupils were in public schools, 135,627 in private schools. The number of classes in the public schools was 78,675, hence the average number of pupils per class room was 25. The private schools had 8,791 classes, which is an average of 15 pupils per class room. The number of teachers, however, is not equal to the number of classes; it is only 41,336 for public and 5,063 for private schools. The number of teachers shows an increase of 1,500 over the previous year. It is evident that most of the teachers teach two classes a day. The hygienic conditions of the schools and the school furniture are said to be anything but satisfactory. The teachers are not well prepared for their profession and their standing in society is very inferior. The communal authorities are said to be irregular in paying their teachers. A law is being prepared which will protect the teachers from arbitrary action on the part of the local authorities, and securing the payment of a minimum salary by the state.

Japan.—The house of representatives in the new diet of Japan is extremely anxious to cut down the budget, and a conflict is imminent between it and the government on this subject. Its proposals are sweeping, and if carried out would cause no little consternation in the education department. The grant for schools would be reduced from $800,000 to about half that sum. Some five years since the late Viscount Mori, who perished by an assassin's knife on the day of the declaration of the constitution, just two years ago, established five great secondary schools in different centers throughout the Empire, to act as feeders for the university and to serve as a check on the growing congestion of students in the capital. These institutions are specially threatened by the parliamentary reformers, many of whom hold Spencerian views and dislike government control in education. Generally speaking, this is a critical time for education in Japan. The rising generation is growing up without those habits of instinctive obedience and reverence which characterized the previous civilization, and the capable teachers are all young and comparatively untried men. The question how to preserve sound morality and discipline in the schools is causing grave concern at headquarters. There is a conservative government at full flow just now; the demand for foreigners as teachers is at ebb, the schools in most cases preferring Japanese who can help them to translate. Foreigners have never been so unpopular since the great revolution.

There is a troublesome class in the capital known as *soshi*, a word which is difficult to translate so as to convey an adequate meaning. They are not students, though so described sometimes, but rather political unattached meddlers who would right all wrongs by use of the sword, sticks, and bombs. They profess to be intense patriots, and are certainly in many cases reckless of their lives and most deliberate in carrying out their plans. The only school in which anything of the *soshi* spirit has appeared is the secondary school of Tokio, some of the students in which have once or twice disgraced themselves. (London Journal of Education.)

Mexico.—The Pædagogium (Dresden and Vienna) of March, 1891, contains an interesting account of recent educational movements in our neighbor republic, written by a resident, whose name is withheld by the editor, Dr. F. Dittes.

For a number of years both the central government, as well as the officials of the separate states, have made praiseworthy efforts to promote public instruction, and particularly to bring the education of the masses to a level worthy our century, and by doing so to lift the degree of culture of the nation in morals, science, and material welfare, so that Mexico might occupy a place among the civilized nations of the world corresponding to its advantageous natural conditions and resources.

However, these efforts and the willingness to make grand sacrifices have not been crowned with the success which one would justly be entitled to expect, if the enormous sums are considered that were expended for the purpose.

The main causes of this lamentable fact are, the want of well-trained professional teachers; frequent misunderstanding of educational theories taken from foreign pedagogical works; the blind acceptation or rejection of new ideas, methods, and theories in accordance with the first impression; finally, the chaos arising from the fact that every state, however small it may be, and although all are subject to the same central government, has its own school legislation. Hence, in the preparation of teachers in the studies of elementary and secondary

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schools there is no uniformity in the curricula, and from year to year, even within the course of one school year, changes are made which prolong or shorten the course. The student is obliged, under such circumstances, to lose time and means in order to adjust himself to the same conditions in case he moves across the border of his little state. More frequently he loses confidence in science and its teachers. The same chaos prevails in the philosophic fundamental principles according to which science is taught in the higher seats of learning.

While here pedagogy is taught after Herbert Spencer and psychology *a priori* after Jaime Balmes, at another place psychology is taught after Spencer and logic after Tiberghien; here flourishes the positivism of August Compte side by side with the rationalism of Krause and Ahrens, and again at another place we find the philosophy of St. Thomas of Aquino luxuriating under the shadow of Charles Darwin.

Orange Free State.—The system of education in Orange Free State is national. Small grants are also made to the Episcopal and Roman Catholic Churches. The government schools are managed by elected local boards, which choose the teachers, who are appointed by the President if he is satisfied with their qualifications. Education is not compulsory nor free, except for very poor children. In 1890, 17,000 livres was allotted to education, being a portion of interest on a capital of 200,000 livres set apart by the "Volksraad" for this purpose. In 1889 there were 49 government schools, inclusive of the two higher schools and the infant school at Bloemfontein, with 2,139 pupils and 74 teachers. Grants are made to private schools on certain conditions. In 1889 there were 14 such schools with 211 pupils. The Grey College, the highest school for boys, prepares candidates for the matriculation of the Cape University. There is a similar school for girls. (Statesman's Yearbook.)

Ecuador.—The religion of the republic of Ecuador, according to the constitution, is the Roman Catholic, to the exclusion of every other. Primary education is gratuitous and obligatory. There is a university at Quito and university bodies at Cuenca and Guyaquil. There are 37 secondary schools and 856 primary schools, with, according to official statistics, about 60,000 pupils. There is a scientific institution in Quito with 11 professors and 50 students. There are commercial, technical schools, and military schools.

Persia.—In Persia there are a great number of colleges (medresseh) supported by public funds, in which students are instructed in religion and Persian and Arabic literature, as well as in a certain amount of scientific knowledge, and many schools for children, while private tutors are very common, being employed by all families who have the means. A polytechnic school with a number of European professors, opened in Teherân forty years ago, has done much towards introducing the knowledge of Western languages and science into Persia. There are also military colleges at Teherân and Tabriz; but the bulk of the population are taught only to read the Koran.

Peru.—In Peru elementary education is compulsory for both sexes, and is free in the public schools that are maintained by the municipalities. High schools are maintained by the government in the capitals of the departments, and in some provinces pupils pay a moderate fee. There is in Lima a central university called "Universidad de San Marcos," the most ancient in America. Its charter was granted by the Emperor, Carlos V. It has faculties of jurisprudence, medicine, political science, theology, and applied science. Lima possesses a school of mines and civil engineering, created in 1874, with good collections and laboratories. There are in the capital and in some of the principal towns private high schools under the direction of English, German, and Italian teachers. Lima has also a public library with a rich collection, besides the one of the university and school of mines. There are two minor universities at Cuzco and Arequipa. (Statesman's Yearbook.)

Portugal.—In Portugal the superintendence of public instruction is under the management of a superior council of education at the head of which is the minister of the interior. Public education is entirely free from the supervision and control of the church. By a law enacted in 1844, it is compulsory for parents to send their children to a place of public instruction; but this prescription is far from being enforced, and only a very small number of children of the middle and lower classes really attend school. According to official returns of the total population at the close of 1878 the number of illiterate inhabitants in Portugal and its islands is stated to be 3,751,774, or 82 per cent of the total population, including, however, young children. The total school population in 1885 was 332,281. In the year 1887 there were 3,739 public primary schools with 179,089 pupils, and 1,608 private primary schools with 60,725 pupils. The total day school at-

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tendance of 329,800 gave an average of 50.9 per cent per 1,000 inhabitants. For secondary instruction there were 22 lyceums with 215 teachers; 74 private schools and a royal military college with 272 students. For higher instruction there are (1887) the following schools and colleges: The University of Coimbra, founded in 1290, with faculties of law, medicine, mathematics, and philosophy, 774 students; the polytechnic schools of Lisbon, and Oporto, 354 students; the medical schools at Lisbon, Oporto, and Funchal, 286 students; a military and a naval school at Lisbon, an agricultural and veterinary institute at Lisbon, and a higher school of literature. For special instruction there are: The industrial and commercial institutes at Lisbon and Oporto with (1887) 1,222 pupils; 14 other industrial schools with 1,078 pupils, 4 artillery and 2 naval schools (corvettes) with together 314 pupils; and 15 teachers' seminaries with 3,838 students. The clergy are educated in 22 establishments, where most of them receive gratuitous instruction. Schools of agriculture are being established in various parts of the country.

The expenditure of the ministry of public instruction, according to the budget of 1890-'91, is 1,102,283 milreis, exclusive of 643,223 milreis to be expended through other ministries. (Statesman's Yearbook.)

Russia.—The Government is making strong efforts at Russifying the Grand Duchy of Finland. All the secondary schools have received a new course of study in which the Russia, language predominates. Thus the Baltic provinces with their almost exclusive German population and Finland with its Swedish population are to be made Russian provinces in fact as they are now in name. (Paed. Ztg.)

Roumania.—In Roumania education is free and compulsory "wherever there are schools," but is still in a very backward condition. There are about 3,000 primary schools with 130,000 pupils, or about 2 per cent of the population (in Great Britain the proportion is 12.3 per cent). There are 8 normal schools with 800 pupils; 54 high schools with 8,000 pupils; 2 universities (Bucharest and Jassy) with faculties in law, philosophy, science, and medicine, and having about 100 professors and teachers and 800 students.

Salvador.—Education is free and obligatory in Salvador. In 1888 there were 732 primary schools with 27,000 pupils; 18 higher schools (including 2 normal and 1 polytechnic school) with 1,293 pupils, and a national university with faculties of jurisprudence, medicine, natural sciences, and engineering, attended by 180 students.

In the capital is a national library and museum, and in the republic 13 newspapers are published.

Transvaal.—There are 10 English schools in Pretoria, and one or more in each of the other towns. According to the report of the acting superintendent of education for the year 1888, the sum of £24,987 was spent for the education of 5,475 pupils. In 1889 there were 28 village schools and 196 ward schools, besides a gymnasium with 173 pupils at Pretoria. The establishment of a university is contemplated and £20,000 were voted for the purpose by the Volksraad.

Santo Domingo.—Primary instruction in Santo Doningo is gratuitous and obligatory, being supported by the communes and by central governments. The public or state schools are, primary, superior, technical schools, normal schools, and a professional school with the character of a university. On December 31, 1884, when the last school census was taken, there were 201 municipal schools for primary instruction, with 7,708 pupils. It is estimated that there are now 300 schools with about 10,000 pupils.

There are several literary societies in the capital and other towns, and in the republic there are published about forty newspapers. (Statesman's Yearbook.)

17.—PENSIONS.

Scotland.—Glasgow has a scheme for the pensioning of teachers which it will be interesting for American leaders to study. The actuary has worked out the details with great care. It applies to all employés of the school board. There are six classes—headmasters, assistant male teachers, assistant female teachers, office staff, janitors, and compulsory officers. The first three classes only are considered in detail, and the assessments of salaries are made at the following rates: Headmasters, 8 per cent; assistant male teachers, 5 per cent, and assistant female teachers, 8½ per cent, the total amount of the capital fund required to be found at present being $300,000, or, including the other three classes, $350,000. There were in June, 1889, in the employment of the board 67 headmasters, ranging in age from 35 to 65; the average scale of salary ranging from $1,250 to $2,000

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per annum. Of assistant male teachers, there were 216 who drew salaries ranging from $300 to $650, and averaging $465, and whose ages ranged from 20 to 59—only 6, however, being above 44 years. The assistant female teachers numbered 335, and the average scale of salary was from $250 to $450. Of these only 25 were over 40 years of age, the largest class being that between 25 and 29 years. Although, as a general rule, the rate of salary increases with age, that rule is not invariable. Among the female assistants the highest average salary is between the ages of 40 and 44, in which class the average is $455; and amongst male assistants the same class stands highest, with an average salary of $635. (Schoolmaster.)

England.—"It is indisputable," says the Birmingham Daily Gazette, "that a large percentage of school masters and mistresses would not be able to put by even a shilling a week without feeling the loss of it. In villages the salaries of mistresses range from $175 to $300 a year, and of masters from $200 to $350. It is by no means uncommon to find that on these earnings a man is keeping a wife and family, and, as is well known, it would be greatly to his disadvantage not to keep up the appearance of being fairly well off. To compel these people to make provision for old age is only to increase their present difficulties, and if any such scheme was adopted which required a pension premium, its operation would have to be limited to those cases in which fair salaries are paid. Take them altogether, teachers are not a particularly provident class, and considering that they are aware that old age and infirmity must disqualify them from performing their duties, it is remarkable that they so seldon think of the future and prepare to meet emergencies."

The leading exponent of the opinion of the Church of England has been turning to the subject of paying pensions to elementary teachers, and declares itself in favor of government interference. If one could "put back the clock" just 45 years to the time when licensed teachers were just being called into being, it would be easy, in the opinion of many, to say that each licensed teacher should pay $10 a year into a pension fund, to be met by a similar sum out of the Parliamentary grant, and thus secure a valuable sum, payable on death, should that event occur before the teacher has reached the age of 65, and an income of $200 a year forever afterward. And if some such rule had been adopted our English elementary teachers would now all of them be in the position of their fellow-workers in almost every continental European country, where, as Mr. Arnold testified, pension schemes for primary teachers are practically universal.

It is, of course, perfectly possible for Parliament (adds the Guardian) to enact such a rule in the case of all persons who in future shall join the ranks of the teaching profession. But what in the mean while is to be done with the 43,500 existing teachers for whom no such rule was made when it was possible for them to observe it? In the interest of education as well as humanity we plead for an early consideration of this question. Teachers who go about their tasks with a feeling of security as to the future will do infinitely better in their trying work than those for whom the future is a blank, unrelieved by any prospect but that of a cheerless old age in the workhouse. If the state assumed the whole responsibility for finding pensions at the age of 65 (still further contends the Guardian) for every licensed teacher, inasmuch as with the present total of 43,500 teachers there would probably never be more than about 6,000 over 65 years of age, the whole cost of pensioning those persons off at $200 a year would be less than a quarter of a million pounds. And what is a quarter of a million pounds (in this case $6,000 \times 200 = \$1,200,000$) for the worn-out teachers by the side of the £2,000,000 a year with which Parliament has just endowed the parents of elementary scholars?

18.—PSYCHOLOGY.

Synopsis of "Historical Sketch of the Idea of Apperception."—(1) Leibniz, who first used the term "apperception" gives it the significance of consciousness or distinct, conscious conceiving, coupled with remembrance, in contradistinction to weak perceptions which make impressions on the senses, but not in consciousness; and again he defines it as an act of taking hold of the contents of a concept by arbitrary attention or as a reflexive cognition of our inner conditions, or, in short, as self-observation. Apperception with Leibniz has the characteristic of spontaneity, only dependent upon the determinative influence of the existing—i. e., accumulated—contents of the soul.

(2) Kant finds that the sense impressions and inner emotional experiences offer the raw formless material of cognitions. With the aid of imagination these cog-

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nitions are fitted into forms of space and time already existing in the soul. But in order that they may obtain the significance of concepts, certain innate pure notions of the understanding are added so as to connect them. He assumes the existence of certain categories grouped under the heads of quantity, quality, relation, and modality. As he assumes two sources of knowledge, (1) sensual and emotional experience which offer the material, and (2) our self active interior which molds the material into forms, so he assumes two faculties corresponding with these sources: (1) the faculty to receive impressions, (2) the faculty to call forth representations. The former is termed "receptivity of the senses," the latter "spontaneity of the understanding." But previous to all this are, "a priori" the pure concepts of space and time, as well as the pure notions of the understanding which we add to the experience as something inborn. This spontaneous activity, which combines in self-consciousness the various impressions entering through the senses, is called "apperception." He also calls it "self-consciousness."

(3) Herbart thinks that every perception entering consciousness through the senses acts upon the concepts present as an irritant or stimulant, pressing back everything contrary to it and attracting all similar concepts. All concepts in consciousness are grouped, and a new perception induces new conditions among them, *i. e.*, fusing or arresting a fusion of concepts. It is like a light casting its shine all around upon the existing mass of concepts. The new percept in the center at first has a controlling influence, and attracts similar and repels dissimilar concepts. It joins those with which it establishes relation and is assimilated by them. At times it is so powerful that it changes the complexion of the already accumulated group of concepts which it joins. This assimilation of the new matter by concepts already existing is apperception, and hence Herbart finds no spontaneity in it. Even the categories (see Kant) are to him results of adjustment between the simple concepts and groups of related concepts. Searching for the conditions of apperception, he recognized and emphasized the importance of that residue or store of concepts acquired in the course of life; that is, its importance for the acquisition of new impressions and experiences. With that the definition of apperception as a resultant of gradual development of the mind is given.

(4) Lazarus claims that in the process of apperception two stages must be distinguished; that of action and reaction. The soul may react upon sense impressions in two ways: first, according to its original nature, then according to the nature acquired by its previous activity. In the former case the result is perception, in the latter apperception. Every perception is also an apperception; that is, a reaction of the soul filled more or less with the contents of former processes (concepts). The soul, as a sensible being, perceives according to its original nature, and it apperceives according to the elements acquired through earlier actions. An apperception is not added to complete a perception, but perception is formed under the assisting and essentially determinative influence of apperception. Hence, generally speaking, apperception may be considered as a reaction of the soul (filled with contents of former action) against outer and inner perception. He also calls attention to the importance of unconscious perception, as well as that of feelings and tendencies, moods and volition.

(5) Steinthal sees in apperception a result rather than an action. The new percept entering consciousness through the senses meets masses of concepts and thereby cognition is generated (that is apperception takes place). The new percept seeks, as it were, memory images of the same or similar objects of observation, being interpreted by them, measured, and put in rank and file, to speak figuratively. Like other philosophers he lays much stress upon the emotional action of the soul in facilitating or checking these processes of degenerating, which by him are termed apperception. The soul's contents consisting of well articulated groups of concepts and series of thoughts react with different force. Some groups which are reproduced regularly, such as one's professional ideas, apperceive more readily. That group always apperceives which either absolutely, or only in the special case, proves the most powerful. A chief condition for the relative power of the concepts is interest which causes attention.

(6) Waitz speaks of residua, remainders, that is, after effects of perceptions in the soul by which all subsequent conditions of the soul are modified. In earliest childhood a confused mass caused by simultaneousness of different impressions, apperceives all separate sense impressions; but in later years no pure and isolated perception can take place because the interior is always preoccupied by a greater number of remainders of previous processes with which the new perception has to make terms.

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(7) Wundt, using a simile, says: The concepts which at a given moment exist in consciousness differ with regard to their distinctness. This fact may be compared with a similar phenomenon observed in the act of seeing. The pictures of outer objects which are formed on the retina are most distinct at the point called the focus. Their clearness diminishes more and more the farther away they are from that point. Taking consciousness as an inner seeing it may be said that all concepts present at one moment are within the field of vision, while only one is in the focus of consciousness. The entrance of an image into the field of vision he defines as perception; its entrance into the point of vision (focus) as apperception, and to bring it to that point a definite psychical action is necessary, namely this: The image being present with others in consciousness as a percept is seized upon and brought to greater clearness by attention. But attention is an act of the will. Hence, apperception is an act of volition, a determinative action of the will upon the concepts. The will being an inborn faculty makes apperception a spontaneous action. He briefly defines apperception as conceiving activity of the mind, the sum and substance of our intellectual activity. (After Lange's "Apperception.")

19.—Religious and Moral Education.

Netherlands.—At the annual general meeting of elementary teachers, held this year at Sneek, in Friesland, the president made a reference to the state of primary education, as affected by the revision of the school law in 1889. The revised act provides for State aid to voluntary schools, or, as they are termed in Holland, schools with the Bible. At first the gravest fears were entertained by all the lovers of enlightenment and progress that the act would be interpreted in the narrowest sense, as has been the case with a somewhat similar change in Belgium. But thus far such apprehensions have proved groundless. The president called the new act one of pacification. It had been honestly and impartially administered by the government. There were, however, still some defects to be remedied, the principal of which was the abnormal size of the classes in some districts. When one teacher had charge of sixty children, as was too frequently the case, all talk of intelligent teaching was mere mockery. (Lond. Jl. of Ed.)

France.—Several voices are being raised against the nonreligious instruction by the public elementary schools. M. Keller, formerly member for Belfort, adjures the Catholics to come to the rescue, and open schools in opposition to the public schools. "The time is not far off," he writes, "when all the public schools, like the high public offices, will be in the hands of the freemasons, and when the children will receive an education no longer neutral in its character, but downright bad in its tendency." He advocates schools of a more pronounced religious character, in which religious instruction shall have the first place, and in which all the books, classics, prize books, and recitation books included, shall bear testimony on every page to God and his wonders. No science must be taught that is not illustrated from a religious point of view. Statistics, however, do not give such a desponding account of voluntary schools. In 1878 there were 8,110; in the following year 12,426, and at present there are about 13,000 Catholic voluntary schools. (Schoolmaster.)

At the instance of M. Causeret, a school inspector at Poitiers, the prefect of the district has lent his sanction to a plan for encouraging the moral development of children by establishing permanent records in the schools of notable acts of courage or devotion performed by pupils of the school. The proposal is universally approved. One teacher enlarges on the desire for praise existing among children, and considers that the plan will "inspire the pupils with the love of that which is good," while another affirms that "the best definition of virtue is a roll of the virtuous." The promoter has decided to enlarge the original scope of his plan so as to include not only present pupils, but those old pupils who have distinguished themselves by obtaining a medal or a diploma of honor for any act of courage or devotion. It is hoped by this means to "arouse in the children and develop all those civic virtues which make the strength of armies." The children will be stimulated against the time when they are called upon to serve "la patrie" by the example of those who, upon the battlefield have performed some striking deed or who have died for their country. In establishing the record of the brave the following order of procedure is laid down: (1) When the inspector reports a special act of bravery, the prefect should present a board and a book of honor to the school; (2) the young hero's name is to be written on the board and the official record of his deed, after publication in the local official journal,

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is to be duly inscribed in the book of honor; (3) the pupils who have secured a medal or diploma for an act of bravery, or whose military service may have entitled them to the cross of the Legion of Honor or a medal shall have their names inscribed on the board; (4) the names of old pupils who have perished on the battlefield shall be carefully preserved ,and, if possible, engraved on a stone or marble tablet conspicuously placed in the schoolroom. (Lon. Jl. of Ed.)

Germany.—The Prussian minister of education has reversed the decision of a provisional council and declared that children of parents who profess no religious faith are not to be compelled to attend scripture lessons in schools, even when they receive no religious instruction in gymnastics at home. Moreover, such children are not to be refused admission to high schools and normal schools.

20.—SALARIES.

England.—In England, out of 12,087 head masters, only 357 (less than 3 per cent) receive salaries of over £300 ($1,500) per year; and of 16,308 head mistresses, only 449 (less than 2.8 per cent) receive over £200 ($1,000). The average salary is £134 (about $670) for head masters and £82 ($420) for head mistresses.

Germany.—A new scale of salaries for teachers of elementary schools in Germany has been adopted by the city government of Bremen. In the primary schools of the city the salary of a principal will be hereafter from $875 to $1,125; that of teachers from $375 to $750; the higher salary mentioned to be reached after eighteen years' service. In the country districts of the city (it must be remembered the free city of Bremen, like Hamburg and Lubeck, own a limited territory outside of the city limits, analogous to Washington and the District of Columbia) the salaries of the principals are slightly less than in the city, but those of teachers are the same as those in the city. The principal of the normal school in Bremen has $1,500, rising to $1,650 in seven years, the professors begin with $650 and reach $1,125 after twelve years.

France.—The principals of boys' primary schools who formerly, that is, before the great revival of public education, had only from $500 to $700 annually, now have from $820 to $1,060. The principals of girls' primary, who formerly had from $460 to $710, now have $580 to $910. The male teachers, who had formerly had salaries ranging from $340 to $480, have now from $520 to $720. The female teachers, who had formerly salaries ranging from $340 to $420, now have from $380 to $620. The city appropriation for 1889 for current school expenses was $4,944,881, while in 1871 it was only $1,920,179; and during the years 1871 and 1887 the city paid $17,000,000 for the erection and remodeling of school buildings. (Allg. Dr. Lztg.)

Spain.—The library of Madrid has published a general view of the delays in the payment of Spanish teachers. A large number have not seen for twenty years a third or a half of their salary. More than 25,000 teachers have not received their regular payments. In all, the sum due to teachers amounts to 3,055,033 pecetas, or considerably over $700,000. A teacher in Benjarin, Grenada, was owed 2,124 pecetas, but as he could not get any money he took to selling matches, while his wife and daughters sought positions as domestics. Many teachers have been obliged to receive public charity. Many have closed their schools, not having the strength to continue their work. A teacher in Torviczon, to whom the commune owed 6,000 pecetas, was shut out of the schoolroom because the proprietor could not get his rent. While she was able she had paid the rent, adding this to the amount due her from the Government. The report leaves one wondering if all the public spirit in Spain is confined to public school teachers. (Freie päd. Blätter.)

Germany.—The Statist. Jahrbuch für höhere Schulen states that normal school teachers are paid:

Salaries for normal school teachers for 1890-91.

Country.	Annual salary.		Country.	Annual salary.	
Prussia	$425	$675	Hessia	$450	$1,075
Würtemberg		775	Oldenburg	500	950
Anhalt	525	750	Weimar	475	750
Hamburg	500	1,350	Brunswick	450	900
Bavaria	570	1,200	Bremen	675	1,060
Saxony	575	1,125	Alsace-Lorraine	400	1,025
Baden	450	900			

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It must be remembered that these are not the salaries of teachers of primary and grammar schools, but of normal and training schools. In view of that fact, Americans are apt to consider these salaries pauper wages.

In *Prussia* the average salary in the country is $256, in the cities $319. To these cash salaries should be added 20 per cent for rent and fuel, which are free to teachers. They either live in dwellings especially built for the accommodation of teachers or in lieu of a dwelling a supplementary payment is made; hence the salaries may be said to range between $300 and $370. Principals of buildings, of course, get more, between $400 and $800.

In *Saxony* the beginning is $190. If the school has more than forty pupils the salary is raised progressively to $323. Principals receive a minimum salary varying according to the population; thus in towns with less than 5,000 inhabitants, $450; in towns of 5,000 to 10,000 inhabitants, $563; in towns of more than 10,000 inhabitants, $675.

In *Würtemberg* the scale of salaries rises from $225 to $500.

Hessia gives its teachers in the cities of less than 10,000 inhabitants from $225 to $450, and in larger cities from $300 to $550. Women get between $225 and $450.

The minimum salary in *Bavaria* is $200, the maximum $211, according to the size of the town. To that is added an annual increase, according to length of service, which ends when $300 per annum is reached.

In *Baden* the communities are divided into five classes with reference to salaries: I, $195; II, $210; III, $240; IV, $270; V, $300. In large cities higher salaries are paid.

Here are mentioned a few cities of *Germany* with two columns, showing minimum and maximum salaries of teachers (not principals) of elementary schools:

Lübeck	$225	$800	Mayence	$482	$703
Bremen	225	821	Heidelberg	480	705
Mannheim	517	667	Darmstadt	420	600
Crefeld	450	667	Zwickau	371	700
Chemnitz	412	750	Brunswick	325	714

Karlsruhe, Duisburg, Osnabrück, Freiburg (in Baden), and several other cities pay like Brunswick. Others, notably the wealthier and larger cities, like Hamburg, Frankfürt, and Berlin, treat the teachers better. The minimum in Frankfürt is $430; in Berlin, $390; the maximum in Frankfürt is $850; in Berlin, $810. The rectors or principals in Berlin get from $795 to $971. In Frankfurt the principals are all on a level with regard to salaries, they receive $1,050. Dresden pays to teachers $484; to principals, $1,200. To all these sums about 20 per cent should be added for rent and fuel.

Basil averages $643; Zurich, $446; Geneva, $438; Neuchâtel, $388; Wallis, $369; Schaffhausen, $350; Glarus, $322; some cantons make additional payments.

In Belgium, minimum for teachers $240, assistants $200.

Law fixes the minimum for principals in *Netherlands* at $294, for teachers at $252, for assistants $169.

Salaries rise in Sweden from $140 to $168 within five years of service. In some localities teachers get $380.

The lowest salary in Norway is $185, the highest $400.

The lowest in Denmark is $224, the average is $280, in some localities $392 is paid.

Salaries in Greece are $16, $20, or $28 per month, independent of an annual sum of from 20 cents to $1 per capita of pupils.

In Turkey a monthly salary of $37 if licensed, but only $22 if without diploma.

Italy brings us back to low averages: $112 and $244, with an increase of 10 per cent every six years.

In Spain salaries range according to population: $111 is the minimum, $370 the maximum.

In Russia the average salary is $97 per annum.

Minimum salary in Portugal is $113 per annum and an addition for regular attendance. After the first six years an increase of 25 per cent of the minimum salary is given.

In England, of 15,243 male teachers only 211 had the minimum salary of $250. The others ranged between $250 and $1,500. Of 22,434 women 1,394 had the minimum of $200. The others ranged between $200 and $1,000.

In Scotland and Ireland substantially the same salaries are paid to teachers which are paid in England.

Of course the fact must be considered that the purchasing power of money is greater in Europe than with us, but even with due regard to that a teacher's salary may be said to be low in Europe. (Revue Pedagogique.)

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21. SECONDARY SCHOOLS.

Germany—Classical and modern high schools.—The facts presented here are gleaned from secondary schools in Prussia only; but the lessons they seem to teach are applicable to other states of Germany, though there are fewer classical and more modern high schools in southern Germany, notable in Würtemberg and Baden.

On February 1, 1890, more than 100 classical high schools (secondary schools) of Prussia[1] had in their lowest grades less than 25 pupils each, or an average of 18. Of these 20 had only an average of 10 pupils in the "sexta" (lowest grade). The school in Lauenburg needed a teacher for 6 "sextaners," that in Münstereifel 1 for 7, those in Hadamar and Rheinbach 1 for 8, those in Gentheim and Marue 1 for 9, those in Attendorn, Dramburg, Otterndorf, and Riethburg, and other towns 1 for 10 pupils. All these schools are classical high schools or gymnasia, in which the ancient languages claim the lion's share of time and energy.

A different picture is presented when we look at the high schools without Latin. Where all circumstances are equal, that is to say, where the number of inhabitants and the industrial, professional, artistic, and commercial pursuits of the people are about equal, we find that the classical school has an almost empty "sexta," while that of the modern school without Latin is overcrowded.

A comparison of a few cities may prove this. Take, for example, the high schools of Lüdenscheid and Bockenheim. In these cities of equal size and similar conditions of life, we find that Lüdenscheid, with 15,000 inhabitants, has only 17 pupils in the lowest grade of its gymnasium, the classical high-school, while Bockenheim, with 17,500 inhabitants, does not show the relative number 20, but 58 pupils in the lowest grade; but then its high school is one without Latin. Even in cities that have both kinds of schools, the same fact may be observed. Emden, for instance, has 20 pupils in the lowest grade of its gymnasium, and 34 in that of the modern school without Latin, which school is only a few years old.

Precisely the same facts are noticed in larger cities, and they prove most convincingly that though the people turn away from the classical languages, they do not mean to desert higher education. Merseburg, for instance, has 16,800 inhabitants, but only 23 pupils in the lowest grade of its classical high school. But annually 190 boys in that city reach the age of nine years, hence might enter the high school (the course of which covers the years from nine to eighteen), but 167 of them do not. It is reasonable to suppose that many of them would do so if a higher school without Latin was founded. Compare this with Emden. This city has only 14,000 inhabitants, but 56 pupils in the lowest grade of its high school without Latin, or about one-third of the boys of that age in that one year.

Here is another instance: Memel has 18,800 inhabitants and only 23 pupils in "sexta" of the high school, which is a classical one. How many of such pupils it might have may be seen from Graudenz, which has 17,300 inhabitants but 113 pupils in the lowest grade of its high school without Latin. Görlitz has 55,600 inhabitants and only one high school, a classical one. It has 55 "sextaners," while Potsdam, with 51,000 inhabitants and a modern high school, has 175 "sextaners."

How little the gymnasia answer the demands of modern life is seen from the way the people are deserting them. The gymnasium at Memel had in 1882 49, in 1890 it has 23; that at Friedberg had in 1882 35, in 1890 it has 18; that at Gumbinnen had in 1882 40, in 1890 it has 17; that at Havelberg had in 1882 46, in 1890 it has 19; that at Marne had in 1882 25, in 1890 it has 9; that at Oldesloe had in 1882 30, in 1890 it has 16 pupils in the lowest grade. Since the number of inhabitants of these towns has not decreased, but, on the contrary, increased during the eight years mentioned, it is plain that the cause is to be sought in the schools and the trend of the time. "If these towns had high schools without Latin more boys would aspire to a higher education," says the Zeitung für das Höhere Unterrichtswesen. "Despite the facts set forth, the Government of Prussia aids the establishment of new classical high schools and discourages that of modern schools. This is seen from the fact that during the school year 1889-'90 eleven new classical schools have been opened and only one modern high school with Latin." (Ztg. f. d. höh. Unterrichtswesen.)

England.—"We think that the time has come when the state might usefully take some degree of responsibility for the entire educational system of the country. What the degree should be will necessarily be a matter for discussion

[1] Prussia has about 300 classical high schools gymnasia.

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whenever action is taken; but we entirely fail to see why only one class of schools should have the advantage of Government examination and encouragement. There is no reason to doubt that most of the secondary schools of the country are doing excellent work; but there are also some which might do far better work than they are now doing, and many which provide an education but ill-fitted for the necessities of the day. In addition to this, education in the middle and higher class schools is terribly expensive, and we do not at all see why one section of the community should have free education provided for their children while all the other sections, which find most of the money, get no benefit whatever. Our present educational system is entirely a class system. It benefits one class only; but it is easy to see that there are great numbers of people, such as professional men, tradesmen, farmers, and persons of small independent means, who want help in the education of their children much more than the well-paid artisan or mechanic. The classes we have named find a large portion of the money now spent upon elementary schools, which are of no use to them, and paying so heavily as they do for the benefit of other people, they are entitled to ask for a little advantage to themselves. We may rely upon it also that they will be certain to get an advantage if they ask for it with sufficient persistency." (Nott. Daily Guardian.)

France.—M. Dupuy, in his financial report to the chamber on public instruction (France), set forth as follows the chief causes of the decline of colleges and lycées: (1) The increase in the cost of board and teaching; (2) the incessant change of text-books, and the expenses thereby imposed upon parents; (3) the constant change in the programmes and the method of teaching; (4) the general state of instability in these institutions, which causes discouragement among the teachers. But to these causes must be added another not mentioned in the report, namely, a growing dislike of the French parent for the whole system of barrack-like education in the secondary schools of France.

Germany.—In the Kingdom of Prussia the classical high schools (gymnasia) are so well patronized that there is one student of a classical high school to every 384 inhabitants of the entire population. How greatly favored these schools are generally may be seen from the following list of cities in which the ratio of population is less than 100: Kiel has 1 student to every 99 inhabitants; Halberstadt, 1 to 81; Munster, 1 to 63; Treves, 1 to 62; Stolp, 1 to 60; Hildesheim, 1 to 58; Tilsit, 1 to 55; Ratibor, 1 to 47; Murbury, 1 to 40; Padeborn, 1 to 29; Freienwalde, 1 to 27; Ostrowo, 1 to 24; Marienwerder, 1 to 21. The number of university students has increased in entire Germany from 17,631 in 1869 to 34,118 in 1888. While the ratio of increase in the population during the same period was only 20 per cent, that of the number of students was 100 per cent. (Paed. Ztg.)

The Berlin city council sympathizes in the feeling against the abolition of the realgymnasium, and has presented a petition on the subject. They point out that the 11 gymnasia in Berlin were attended by 5,569 pupils in December, 1890, the 7 realgymnasium by 3,951. Consequently, the realgymnasium has on an average 58 pupils more than a gymnasium. This number is all the more remarkable when all the attractions and privileges of the gymnasium are taken into consideration. Again, the decrease in numbers in the year was in the gymnasium 219, and in the realgymnasium only 26. (This decrease is probably due to the erection of higher Burgerschulen.) Finally, it seems very probable that when the realgymnasium is abolished the gymnasium will be considered the more aristocratic school, and that the great social danger of sharply defined class schools will arise. The petition closes with this request: "To preserve the realgymnasium, and give the graduates the right to study medicine." (Allg. D. Lztg.)

The mayor of Brandenburg, Herr Reuscher, has sent to the magistrates of all the 280 towns in Prussia in which only one high school exists a document in which he calls their attention to the resolutions arrived at by the school conference in Berlin of December last, and to urge upon them to join in a petition on the subject to the Emperor. "In the towns," he writes, "where the realgymnasia is called in question by the sweeping decision of the conference the city authorities have already taken steps to prevent an utter annihilation of these institutions. The numerous Prussian towns, numbering almost 300, which have only one high school have urgent need of understanding the import of the conference resolutions and of averting the danger which threatens their interests in the immediate future. Not only is the existence of the nine-class realgymnasia, the seven-class progymnasia, and prorealgymnasia threatened in these towns, but also the three upper classes are concerned, in which the number of the pupils "does not justify their existence." This, naturally enough, is very

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often the case in small communities. In order to attain this end a petition has been drawn up demanding the introduction of a common six-class lower school for all kinds of schools, thus directly opposing the resolutions arrived at last December by the school reform conference. (Allg. D. Lztg.)

During the summer of 1889 the gymnasia (classical high schools) in the Prussian province of Silesia had 51 per cent Protestants, 34 per cent Catholics, 0.2 per cent other Christians, and 14.8 per cent Israelite pupils. The realgymnasia (modern high schools) had 64.4 per cent Protestant, 22.7 per cent Catholic, 0.2 per cent other Christians, and 12.7 per cent Israelite pupils. In the citizens' schools (middle schools without Latin) the number of Protestants was 71 per cent, that of the Catholics 13.6 per cent, that of other Christians 0.7 per cent, and that of Israelites 14.7 per cent. Or, taking all these high schools together, the number of Protestants was 56.5 per cent, that of the Catholics 22.8 per cent, that of other Christians 0.2 per cent, and that of Israelites 14.5 per cent. (Allg. D. Lztg.)

In Germany parents are obliged to determine early whether their sons are to pursue higher studies or whether they are to limit their education to the elementary branches, for the high school has its own "feeder" (elementary classes), and rarely takes its pupils from the public elementary school. Moreover, the parents must determine before the boys have reached their eleventh year whether they are to pursue a course which will land them at the gate of the university or of a polytechnical or other professional school. Once fairly started in their career, there is no return possible, except at the sacrifice of some years which they must waste in order to "adjust themselves" to the different conditions, should they or their parents determine upon a change. This inflexibility is the reason why in Germany so many "miss their natural calling." It is the effect of conditions arising from the differentiation in society. An aristocracy of birth, education, or wealth seems a necessity as long as a monarchical form of government is maintained. A monarch must needs have a pedestal, which is found in an ascending scale of society. Hence there is in Europe no such exponent of modern civilization as our common school, which is the most powerful leveler of social inequalities yet devised. While it lifts the lower strata of society, it also drags downward those standing on an elevation; and it is quite immaterial whether this elevation be a money bag, or a pedestal of culture, or a genealogical tree. (Z. R. K. in the Teacher.)

Dr. Viereck, of Berlin, maintains that the educated proletariat is due to the excessive privileges granted to the gymnasiums. He says, "The conclusion is irresistible that the root of the evil is to be found in our scholastic system, which treats the secondary school merely as a step in preparation for the university. The development of political and commercial conditions has had an unmistakable influence in greatly increasing the number of students preparing for a professional career. The force of competition has brought about a more efficient mental training among men of business; for those possessing it are able to succeed where those without it fail. All these influences have worked together to send more students than ever before to the secondary schools. And here lies the difficulty. The students, as a rule, do not select the kind of secondary schools best suited to their wants, but the gymnasium, because of the marked privileges conferred by law upon its graduates. As a result every profession is overcrowded, and thousands of highly educated young men are unable to earn a decent living.

It has finally been decided that the graduates of the Oberrealschulen of Prussia are to be admitted to the university study of mathematics, natural science, architecture, engineering, mining, and forestry, with the prospect of obtaining posts as teachers. Moreover, they are qualified as candidates for posts in the telegraph and postal service and naval architecture and machinery. Realgymnasia receive the same privileges. The final certificate from the Bürgerschulen will qualify for admission into all civil-service posts, instead of only for the lower legal posts. The right to the one-year military service will be so arranged that for the pupils of the nine-year as well as for the seven-year institutions the privilege is discontinued of obtaining the right through mere promotion into the Obersecunda without examination. In the future an examination conducted by a commissioner of the government will be held at the end of a six years' course, and the certificate for the one year's service will depend on this examination. (Lond. Ed. Times).

SECULAR SUNDAY SCHOOLS.

Germany.—Sunday schools (nonreligious) are found all over Germany (notably in Prussia, Saxony, Bavaria, and Würtemburg), Austria, and Switzerland. Their purpose is either (1) to give pupils who have left the elementary school an ad-

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vanced grade of elementary instruction; also, in certain cases, to mend that which was neglected by absence from day schools, in cases of sickness, or otherwise; or (2) to offer technical instruction *ad hoc;* that is, for special purposes, such as preparation for trades, agricultural, horticultural, and commercial pursuits, domestic economy (for girls). The character of these schools varies in accordance with the varying industrial and economic conditions of the towns. While in the Erzgebirge, in Saxony, straw-weaving and metal work are taught, in Switzerland it is clockmaking and designing, while in Dresden and Leipsic, again, schools of languages for hotel waiters, and in Berlin commercial Sunday schools are established.

Both kinds of schools are called "fortbildungs-schulen" (continuation schools), really postgraduate courses of the "volks-schule." They are partly evening schools, partly Sunday schools. The statistical sources at hand fail to show how many of these schools are open on Sunday. Bits of information, however, may be welcome.

Prussia.—The Handwerker-Schule in Berlin had 16 Sunday classes in 1884. The industrial art schools (schools of design) in Rhenish Prussia and other provinces are all open on Sunday from 8 a. m. till noon, as I know from personal inspection. Gewerbe-museums (museums of industrial art). Also fine art museums are open on Sunday.

Saxony.—This is the only country from which exact, though meager, data are at hand, to wit: Trade schools open on Sunday, 13 out of 65. Those not open on Sunday for regular instruction have occasional lectures on Sunday. Technical continuation schools open on Sunday, 22 out of 28. Agricultural schools ditto, 2 out of 9. Commercial schools ditto, 1 out of 32. Many private Sunday schools not accounted for. While these may not be considered formidable numbers, it must be understood that the elementary continuation schools (postgraduate courses) are not enumerated because they belong to the regular day-school system and have the same teachers who teach in day schools.

Austria—(Cisleithania) had in 1889 122,968 pupils and 8,678 teachers in technical, trade, professional, and other special schools, but the official reports fail to state which are open on Sunday. As a matter of fact I know that many utilize the Sunday morning either for regular instruction or for lectures.

Württemberg.—The 173 continuation schools in Württemberg had in 1890 12,271 pupils in arithmetic, 8,459 pupils in language and composition, 2,935 pupils in bookkeeping, 2,921 pupils in calligraphy, 10,705 pupils in freehand drawing, 4,531 pupils in geometrical drawing, 6,346 pupils in technical drawing; namely, 1,627 woodwork, 857 metal work, 3,410 various trades, 326 industrial art, 126 lettering. A great number of these are apprentices and study on Sunday. The city of Stuttgart alone has a Sunday technical school, with 27 teachers and 334 pupils (1890).

Hungary.—(Transleithania) had in 1889 62,220 pupils and 2,449 teachers in similar schools. Same remark regarding Sunday.

Switzerland.—Here the continuation schools and courses are attended by 34,817 pupils, partly regular Army recruits. Time not stated, but it is will known in Europe that Switzerland is famous for its secular Sunday schools, being a poor country.

Since most of the technical and elementary continuation schools (both evening and Sunday schools) are supported by societies, trades unions, and only rarely subsidized by the state, centralized official statements as to their attendance and course of study are wanting. (L. R. K.)

23.—Special Schools.

Switzerland.—The Royal University at Geneva is to open a school for practical training of travelers, giving instruction in geography, geology, botany, geodesy, and other subjects required to fit them to make scientific observations and intelligently form collections of natural objects in distant lands. Similar work was undertaken some years ago by the Royal Geographical Society of London and the Berlin Geographical Society, and arrangements are also provided in Paris for giving such instruction.

Germany.—A number of the professors in the technical universities in Prussia have published a counter declaration to the one issued on December 1, 1890, that the course of study in a gymnasium or classical high school was not a fitting preparation for the studies of a technical university. The supporters of the counter declaration are of the opinion that the Realschulen do not fit the pupils any better than the gymnasia for the technical schools, and that when certain

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defects are removed both kinds of schools will be on a level. Among the supporters of this declaration are Profs. Müller, Jürgens, Damert, and Lüders, in Aachen; Jacobsthal, Dobbert, Schäfer, Hauck, and Wintergarten, in Berlin; Hase, Köhler, Stier, and Backhausen, in Hanover.

Industrial Schools in Europe.—In almost all of the manufacturing towns of Europe during the last half century schools have been opened for apprentices in the industrial arts. In Russia there are no less than 1,200 of these schools with 20,000 pupils. Among justly celebrated preparatory schools are found the Ambats school at Amsterdam, the technical school of Birmingham, Heriot's Hospital of Edinburg, and the St. Luc schools of Belgium. All agree that industrial education can only be really given in a workshop where teachers will be able to instruct pupils by means of practical demonstration and by sketches of design. At Birmingham and Edinburg pupils are admitted to technical schools, which are considered merely as a sort of primary industrial school, where very fine chemical and physical laboratories are at their disposal and in which they acquire a certain practice in preparation for industrial work. The general result is that at the end of their studies the pupils are engaged by industrial superintendents as future apprentices.

In Ireland there is another kind of preparatory schools, to which are admitted only children who have lost both parents, and who are destined for domestic or rural professions. They here receive primary instruction, some knowledge of science and of art, and a sufficiently complete manual training. These institutions combine the two characters of schools and asylums. Beside the primary schools there is a superior kind called industrial and technical. These exist for the object of giving to apprentices and workmen some knowledge of science and art, which will increase the financial value of their work. This is the complete theory and practice of the industrial workshop. Belgium has founded 36 industrial schools, in which are given every evening and on Sundays the elements of a scientific and artistic knowledge corresponding to the profession of those who frequent them. The number attending exceeds 25,000.

In both England and Belgium the number of pupils in proportion to the population is about the same; that is, 4.2 for each 1,000. But instruction in the United Kingdom is better than anywhere else; it has a more scientific and practical character on account of the well-equipped laboratories and workshops, which are placed at the disposition of the pupils. In Holland there are 32 industrial schools and 25 professional schools, attended by about 7,000 pupils. The proportion of these is about 2 to every 1,000; but Holland, so cut up by canals, and with the sea continually breaking bounds, is rather a maritime than a manufacturing nation, so that there is nothing surprising in this proportion as compared with that of Belgium. Switzerland has no less than 87 schools, giving to apprentices and workmen professional instruction. The pupils number 8,000. There are others said to be highly developed, where drawing is a branch of instruction. Thus, in one of the poorest cantons, that of Appenzell, institutions of that class are met in every community, and the attendance is as obligatory as the snows will permit. The industrial population of the cantons is 200,000 persons in a total of 2,846,000 inhabitants, and this balances that of Belgium, where metallurgic and other manufactures are carried to a high point of development.

In Denmark, a country of 2,096,467 inhabitants, there are 77 schools for professional instruction of workmen with more than 6,000 pupils. The technical school of Copenhagen alone numbers no less than 2,000. In Sweden there are 28 industrial schools; that of Stockholm has 800 pupils, more than one-half per cent of the population of the town. Italy, which in 1885 had 136 industrial and art schools, with 16,274 pupils, has since then made great progress; but she is suffering, as England sometimes suffers, from an excess of manufactured articles, and these must be disposed of at any price in order to avoid a ruinous embarrassment. The school at Hamburg, under the direction of Marius Vachon, is the best institution in Germany, both on account of the principles which inspired its creation and the methods of instruction. In entering there, if the pupil is neither an apprentice nor workman he must choose a trade; these two classes of pupils constitute the principal number of the school population.

A law of the Hamburg senate imposes on all industrial superintendents the duty of sending their apprentices to this school for six hours every week. They are thus enabled to attend during three, four, or even five years, according to their disposition and abilities. The first part of the first year is exclusively devoted to the study of the primary elements of drawing. All drawings must be made from nature. After that comes instruction from professional designs. As

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soon as the pupil can sketch he is given as models the objects which belong to his trade. In succeeding years professional drawing goes hand in hand with artistic instruction. Each pupil receives instruction, personal, varied, and rapid according to his temperament and tastes. The discipline is very severe, so that a pupil becomes accustomed to conduct himself as a serious man and to consider work as a social duty. The Hamburg school has served as a model to the schools of design in various parts of Europe. (English Educational Press.)

The Prussian Government has recently, more than in former years, bestowed much attention upon the promotion of so-called continuation schools (post-graduate courses of the elementary schools), as well as trade and technical schools. This is plainly seen from the increase in the sums annually appropriated for these institutions. In the state budget of 1885-86 the sum of $142,266 was designated to support these institutions, which in the nature of the case are directly benefiting the working. In 1890-91 the appropriation rose to $431,716, and in 1891-92 to $445,274. The Government makes the announcement that it is not satisfied with the system of industrial schools as it now exists, but wishes to see it extended over most of the various trades and occupations found at industrial centers. Especially the continuation courses will find encouragement. Through these the Government can reach a much greater number of pupils than through special technical schools. Naturally the latter will be able to offer a higher grade of technical education, and in due time there will, side by side with elementary or people's schools, spring up at convenient centers a system of elementary technical or trade schools, that will feed the secondary technical schools.

The Government intends to establish new elementary architectural schools, devoted to the building trades—one in Königsberg; one in Silesia, and one in Brandenburg. The city of Cottbus is negotiating with the royal government to have one of these institutions located within its precincts. The bureau of technical instruction in the department of public works is of the opinion that to open schools for the training of foremen, and technical schools for the promotion of shipbuilding in Danzig, Stettin, Berlin, Hannover, and Altona, will prove of incalculable benefit to the nation. The Rhenish-Westphalian mining school it is contempleted to remove from Bochum to Duisburg, with branches and "feeders" in the coal districts on the Ruhr-River. Gleiwitz, in Silesia, another mining district also, is to have a new mining school. The existing weaving school of Crefeld and Berlin are to be enlarged, and new schools, with courses for the training of foremen and experts for the cloth and buckskin manufactory, are in process of erection in Sommerfeld, Forst, and Finterwalde, and other centers of the cloth industry. Malhausen, in Thurengia, and Bleichrode, near Nordhausen, are each to have an elementary weaving school. The negotiations with the city of Bunzlau, with a view toward the establishment of a ceramic technical school, have been reopened. For the training of engineers and machinists on ocean steamers schools are to be opened in Stettin and Bremen. In Schmalkalden a school for the preparation of foremen in the so-called variety ironworks is to be established. This institution will have extensive shops for a great number of apprentices.

Schools of design and industrial art the Government intends to establish in all cities of 33,000 or more inhabitants. Where one is in existence others are to be added. Prussia has, according to the last census, 49 of such cities. Of these the following have each a flourishing school of design and industrial art: Aix-la-Chapelle, Cassel, Dusseldorf, Halle, Magdeburg, Hannover, Frankfort, and Berlin. Berlin needs another without delay. But Danzig, Elbing, Bromberg, and Posen have made no claim for such schools. They lean rather toward agricultural and forestry schools. The plans so far determined upon contain 18 new schools within the next six years; others are to be extended. Institutions which have been called into existence by the enterprise of the local authorities are well subsidized by the state and enlarged to meet the growing demands of the times.

The state authorities direct in every case where a subsidy is granted that the teachers' salaries be increased and new talent be drawn into the schools. Whenever the funds allow, these technical schools are made state institutions. The entire state subsidies for the establishment of new and extension of existing technical and trade schools are estimated at 1,078,000 marks ($269,500); this sum is not included in the annual current expenses mentioned in the beginning of this article.

The administration of continuation schools (post-graduate course of elementary schools), so far as they are technical or trade schools, will be turned over to the minister of agriculture, since most of these schools are situated in rural districts, and it is the intention to enlist the interest of agricultural people in these schools.

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The recently submitted bill regulating trades (especially §120) is thought to be the best incentive to trade schools, and it would seem that the state, by promoting such schools, is obeying tendencies which may drive it further and further toward socialism as advocated by Marx. As soon as the bill becomes a law, the annual appropriations for technical schools will need to be increased to meet the requirements of the law. From all this it is plain that Prussia if following the illustrious example of the Kingdom of Saxony in preparing a great number of thinking artisans, foremen, designers, masterworkmen, and inventors, in order not to fall behind in the race with other nations, notably with France, in industrial and wealth producing pursuits. (Engl. Educ. Press.)

24.—SUPERIOR INSTITUTIONS.

Germany.—The number of students in the polytechnicums of the German Empire, in the winter term of 1890-91, was 3,567 as against 3,372 in the previous year; the number of nonmatriculated students, 1,273 as against 1,106; and the number of casual attendants at single courses of lectures, 522 as against 343; on the whole, then, 5,362 as against 4,821 attendants at lectures. Of these Aachen numbers, 197; Berlin, 1,640; Brunswick, 273; Darmstadt, 316; Dresden, 480; Hanover, 580; Karlsruhe, 585; Munich, 882; Stuttgart, 486.

Hessia.—The Hessian Government has laid a bill before the Landtag for the erection of magnificen tnew building, for the polytechnicum in Darmstadt. The cost amounts to $3,912,500. The town has offered to pay $3,000,000, and the Government will supply the rest. The Grand Duke has consented to the appropriation of a part of the palace grounds for the erection of the new buildings.

France.—The French minister of public instruction has issued a circular in accordance with which young men and women who are preparing for the profession of teachers, and for diplomas generally, are to go through a solid course of "sound French literature of the nineteenth century stamp." "This means," says a Paris correspondent, "that they are to give up the old classical authors from Montaigne to Chateaubriand, and to devote their attention in preference to Thiers, Michelet, Victor Hugo, and Alfred de Musset."

Saxony.—The theological faculty of the University of Leipzig, Germany, have, by desire of the minister of education, posted a notice on the university notice board, calling on the students of theology to attend lectures on pedagogy more regularly than they have hitherto done, and also not to neglect the practical side of their training. "A more thorough study of pedagogy and satisfactory practical training is more necessary to theologians now than it ever was."

Germany.—Latest statistics concerning German universities:

	Theology.	Law.	Medicine.	Philosophy.	Total.
Russia	10.9	10.4	17.9	13.2	52.4
Bavaria	9.3	30.6	16.8	11.7	68.4
Saxony	10.1	16.8	17.2	12.8	56.9
Wurttenberg	22.8	17.1	12.9	8.5	61.3
Baden	17.9	19.2	19.8	19.0	75.9
Hessia	10.9	23.3	23.3	22.0	79.5
Mecklenburg	16.5	16.3	23.1	18.5	74.4
Thuringia	16.1	15.4	16.8	18.2	66.5
Oldenburg	15.1	8.4	17.6	10.1	51.2
Brunswick	14.0	16.5	22.2	14.7	67.4
Anhalt	13.4	17.6	19.9	19.6	70.5
Hamburg	5.3	12.8	18.1	19.6	55.8
Bremen	12.1	16.2	30.6	31.8	90.7
Alsace and Loraine	5.2	6.0	8.5	7.4	27.1
Germany (average)	11.6	14.3	17.7	13.5	57.1

The foregoing table shows the ratio of students from the different German States for every 100,000 inhabitants. In other words, it tells that of every 100,000 inhabitants Germany has 571.10 in the universities, or 5.71 students of every 1,000 inhabitants, or 0.571 per cent. That of these, 0.116 per cent study theology, 0.143 per cent study law, 0.177 per cent study medicine, and 0.135 per cent study philosophy. The numbers are given for the winter semester, 1889-90. (Statist. Archiv.)

Algiers.—The Academy of Algiers had, in 1888, 223 students. In 1888 there were 1,547 pupils at the lycées of Algiers and Constantine; 8 communal colleges with 1,254 pupils; in 1889, 958 (113 private, mostly clerical) primary schools,

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with 78,001 pupils; and 154 infant schools, with 24,354 pupils. There are 76 public primary schools for the natives, with 8,963 pupils (910 girls). Of the total children of school age (6 to 13) 611,720 receive no instruction; of these 535,389 were Musselmen.

25.—Teachers.

Prussia.—The proportion of female to male teachers in Prussia is very small. Of the 68,765 elementary teachers only 7,869 or 11 per cent are female teachers. In the private middle schools (private lower schools are very rare) 2,626 of the 3,459 teachers are women. Protestant Germany seems to have a much greater dislike to intrust women with teaching than Catholic Germany. In the whole of Prussia there are only 442 female teachers in the Protestant village schools, whereas over the same area there are 2,304 women teaching in Catholic schools. (Lond. Jl. of Ed.)

Berlin has at present in its public elementary schools 3,200 teachers, 2,182 men and 1,018 women. Of the men, 96.38 per cent had gone through a course of normal school training, 2.29 per cent were university graduates, and 1.33 per cent had prepared themselves privately and then passed the required examination. Three of the normal school graduates had afterward acquired a university education. Only 537 of these teachers were graduates of the normal school in Berlin, 1,640 came from other parts of the Kingdom of Prussia and 5 from other German states. Of the 1,018 women 883 were prepared professionally in Berlin, while 135 came from other parts of the kingdom. (Paed. Ztg.)

England.—Mr. Grasby, the English educator who recently so thoroughly examined the American school system, says of American teachers: "The special feature of the English teacher is technical skill in practical teaching; that of the American, an educated and cultured mind. The time one has spent in teaching or learning to teach the other has spent in study. The one has all along been subject to the influence of a narrowing occupation, and now oftentimes considers himself well-nigh perfect in his art; the other has been under the influences of a liberal training, is well versed in the principles of education, has had little practice in teaching; but is fully conscious of the fact, and therefore, ready to take advantage of every means to compensate for his lack. A conscious ignorance is often better than a self-satisfied knowledge. The average American teacher maintains better discipline with less force; is a superior educator, but less an adept than her English compeer in filling the pupil's head with facts."

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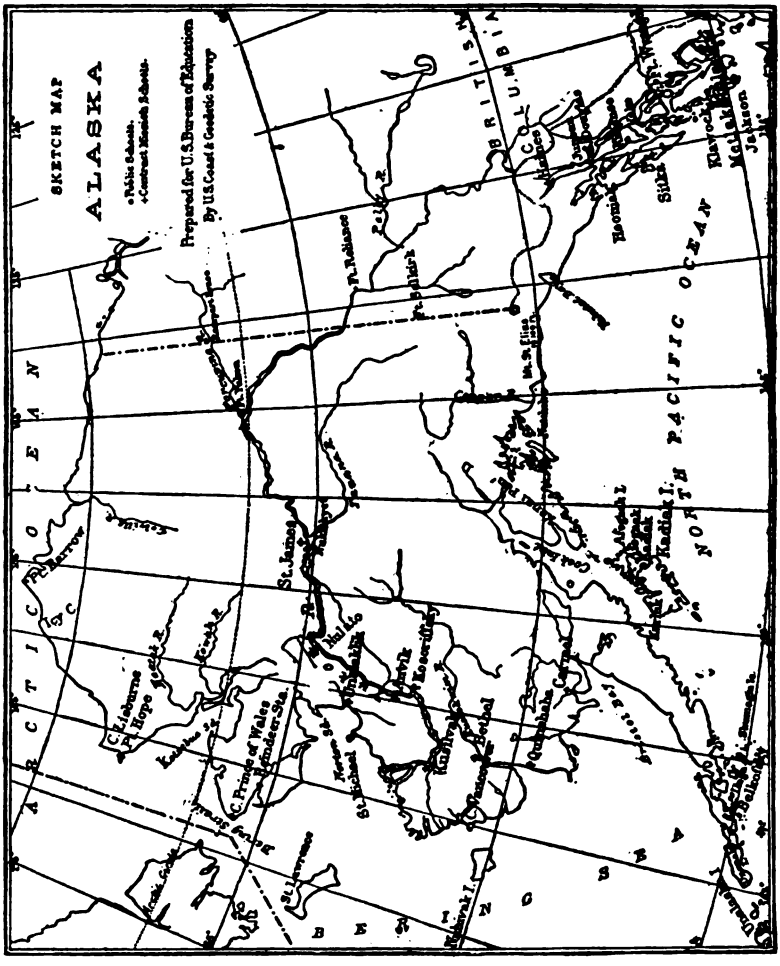

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CHAPTER XVII.

EDUCATION IN ALASKA.

REPORT OF THE GENERAL AGENT FOR THE YEAR 1889-90.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION, ALASKA DIVISION,
Washington, D. C., June 30, 1890.

SIR: In compliance with the rules and regulations for the conduct of schools and education in Alaska, approved by the Secretary of the Interior, April 9, 1890, I have the honor of submitting the following, as the annual report of the general agent of education for the year ending June 30, 1890:

A.—NUMBER AND GENERAL CONDITION OF THE SCHOOLS IN ALASKA.

Alaska has 15 day schools, supported wholly by the Government, with a total enrollment of 1,110 pupils; 9 contract schools, containing 302 pupils, which are supported jointly by the Government and the missionary societies; 10 mission schools, with an enrollment of 297 pupils, which are supported wholly from the funds of the churches, and two schools sustained on the Seal Islands by the North American Commercial Company, under contract with the Treasury Department, and containing 79 pupils, making a total of 37 schools and 1,788 pupils.

I.—PUBLIC SCHOOLS.

1.—UNALASKA DISTRICT.

Unálaska (John A. Tuck, teacher).—Enrollment, 30; population largely Aleuts.

Prof. Tuck reached Unalaska in September, 1889, and renting a house from the Alaska Commercial Company, opened school with an average attendance of 6 pupils. In the absence of any school building, one end of his residence was fitted up as a schoolroom. So much interest was developed in the school that the pupils, with but few exceptions, continued at school during the Russo-Greek Church festivals, which are very numerous. Among the pupils were the grown-up daughters of the Russian priest.

Prof. Tuck reports that the rate of progress was almost all that could be desired.

With the opening of the next school year it is expected that the ladies of the National Home Mission Society of the Methodist Episcopal Church will enter into an agreement with the United States Bureau of Education to take charge of the school, several thousands of dollars having already been raised for that purpose.

The building they propose to erect will be known as the "Jesse Lee Memorial Home."

Unga (John H. Carr, teacher).—Enrollment, 24; population, Russian and Aleut.

Gratifying progress was made in the usual school studies and in temperance hygiene by those who were regular in their attendance.

The teacher pleads earnestly for some rule to secure more regular attendance.

The ladies of the National Home Mission Society of the Methodist Episcopal Church have purchased and shipped to Unga the materials for a teachers' residence, to be known as the "Martha Ellen Stevens Cottage."

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2.—KADIAK DISTRICT.

Kadiak (W. E. Roscoe, teacher).—Enrollment, 67; population, Russian.

At the solicitation of the parents, Mr. Roscoe commenced his school a week in advance of the regular time of opening. The progress of the pupils proved very satisfactory, and the attendance fairly so.

Much inconvenience resulted from the number of holidays of the Russo-Greek Church. These are more than 200 during the year, and they greatly interfere with the regular attendance of the pupils.

During the year the Government erected a comfortable school building, which was greatly needed.

Afognak (John Duff, teacher).—Enrollment, 38; population, Russian and Eskimo.

The Rev. James A. Wirth, who had taught the school from the beginning and was greatly beloved by parents and pupils alike, resigned on account of the health of his wife. His resignation was received so late in the season that there was no time to procure a teacher from the states, and Mr. John Duff, who was already in that region, was appointed.

School was resumed on the 3d of October with 16 pupils, the attendance increasing to 24 during the first week.

From the first many of the parents took an interest in the school and scarcely a day passed that one or more were not visitors.

Geographical exercises on the map were an unfailing source of interest; pupils that did not know half of their letters could point out the States of the United States and give their names correctly.

The ordinary school books speak of so many things that neither the children nor their parents have ever seen that it is difficult for them to understand what they are reading about. To remedy this somewhat Mr. Duff proposes to form a museum of common things in connection with the school and thus give the pupils object lessons in connection with their books.

An interesting feature of the year was the attendance of a number of children from outside villages.

The school has suffered greatly from intemperance, many of the children being on the verge of starvation because the parents had traded off the living of the family for liquor.

Frequently, in visiting his pupils, the teacher found them hungry and shivering in the corner of the room, and both the parents dead drunk.

A comfortable school building and teacher's residence were erected by the Government during the year.

Karluk.—A good school building and teacher's residence were erected during the year at this important point, and a school will be opened at the beginning of the next school year.

The number of villages of civilized Russians in this district requires many more schools than can be established with the amount appropriated by Congress for this purpose.

Professor Duff, of Afognak, estimates that there should be at least twenty additional schools in the Kadiak district.

3.—SITKA DISTRICT.

Sitka, No. 1 (Miss Ann D. Beatty, teacher).—Enrollment, 68, or one more than the total number of white children of school age in the village; population, American and Russian. Among the pupils of this school are the children of the civil and naval officials who are stationed at the capital of the Territory.

Sitka, No. 2 (Miss Gertrude Patton, teacher).—Enrollment, 83; pupils, native Thlingets.

With 280 native children between 5 and 17 years of age in the village, there ought to be some way of securing a larger attendance than 83. A simple obligatory attendance law would work a great improvement in school attendance among the native population.

Juneau, No. 1 (Miss Rhoda A. Lee, teacher).—Enrollment, 33; pupils, Americans.

This is one of the most advanced schools in the Territory. Year by year the public sentiment of Juneau is improving. More families are moving in, and the white school reaps the benefit of this growth.

Juneau, No. 2 (Miss Cassia Patton, teacher).—Enrollment, 51; pupils, natives.

The best portion of this school and the pupils that made the most rapid and gratifying progress in their studies were those that came from the Model Home,

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conducted by Rev. and Mrs. E. S. Willard and their assistants, Miss E. Matthews and Miss Jennie Dunbar, of the Presbyterian Mission.

Douglas City, No. 1 (Mrs. W. S. Adams, teacher).—Enrollment, 50; pupils, Americans.

During the year a comfortable school building was erected by the Government. Owing to delay in its completion the school was not opened until the 1st of February, 1890. The opening of this new schoolroom for the whites allayed the friction of last year, when the children of the whites and natives were compelled to use the same room or not go to school at all.

Mrs. Adams reports that her advanced pupils, in addition to their ordinary studies, have taken up natural history, botany, and simple lessons in mental science.

Douglas City, No. 2 (C. H. Edwards, teacher).—Enrollment, 92; pupils, native.

Douglas Island being the principal center of the mining interests, many natives come from distant villages to secure work for a longer or shorter period. They are constantly coming and going.

This creates great irregularity in the attendance of the children and greatly increases the work of the teacher.

Killisnoo (Miss May Ransom, teacher).—Enrollment, 32; pupils, Russians and natives.

Wrangell (Mrs. Lyda McA. Thomas, teacher).—Enrollment, 84; pupils, natives.

During the year the chief of the village acted as special policeman to look after all truants from school. The result was good, securing greater regularity in the attendance and more rapid advancement in their studies.

Klawack (Mr. Henry C. Wilson, teacher).—Enrollment, 66; pupils, natives.

After the resignation of Mrs. Currie, in the summer of 1889, no teacher was secured until the following spring, when Mr. Wilson reopened the school on the 1st of May, 1890.

Jackson (Miss Clara A. Gould, teacher).—Enrollment, 87; pupils, natives. During the winter a number of parents moved into the village for the purpose of placing their children in school.

Metlakahtla (William Duncan, teacher).—Enrollment, 179; pupils, natives.

This school is of more than ordinary interest from the fact that this settlement is composed of Tsimpseans, who, a few years ago, came over in a body from British Columbia to Alaska in order to secure greater religious and political freedom.

Mr. Ivan Petroff, special agent for Alaska of the Eleventh United States Census, in his report to the Census Bureau, commenting upon the school attendance of the Sitka district, says: "Considering the nature of the population, widely scattered in small settlements, the showing of 1,049 scholars in attendance out of a total of 1,755 persons between the ages of 5 and 17 years is certainly a remarkable one. The number of natives speaking English does not much exceed that of the scholars enrolled."

II.—CONTRACT SCHOOLS.

1.—SITKA DISTRICT.

Sitka Industrial Training School, Presbyterian (Prof. W. A. Kelly, principal with 17 assistants).—Boarding pupils, 164; natives.

Professor Kelly reports: "The past year has been one of marked progress, both in the schoolroom and in the industrial department. It is surprising how quickly the pupils learn English when deprived of their native tongue.

"Our school is distinctively coeducational. The boys and girls recite in the same classes, dine together in the same dining-room, and, under wholesome restraint, have opportunities for social intercourse.

"A few years of sedulous training have developed in some of our oldest pupils a spirit of emulation, a sense of personal responsibility, self-respect, self-reliance, and self-helpfulness which command respect. Most of our large boys, advanced far enough to read intelligently in the second reader, are learning a trade (alternating being in school half of each day and at work half a day), and the diligence with which they pursue their studies, the zest with which they enter upon industrial work day after day is most praiseworthy of them and encouraging to their instructors.

"All of the shoes for the pupils of our school are hand-made in our shop, under the direction of a competent foreman. Considerable custom work is also done.

"Our supply of barrels and half barrels far exceeds the demand, yet we c

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sider coopering an excellent trade for our young men. Owing to high freight, barrels are usually made at the fishing stations where needed, and coopers are in demand at those places.

"We are always pressed with work in carpentry. The variety and scope of work have proved a most valuable source of instruction to the boys, most of whom are aptly adapted to mechanical industry. The boys have made commendable progress during the past year. Young men who can do carpenter work fairly well can find opportunity to ply their trade in any of the villages of Alaska.

"We have eight model cottages, six of which are occupied by young married couples from the school. These young folks have been thrown entirely upon their own responsiblitiy and resources, and they are doing right well in earning a livelihood, while their houses are kept clean, neat, and homelike. The environments of family life among the young folk, in contradistinction to that in vogue among the natives, tend to create new conditions and inspire new impulses among their own people.

"The general work of the school, patching, mending, refitting, making new garments (aprons, towels, underwear, dresses), is no light task. Each girl 8 years old and upwards knits her own stockings, and the large girls find time to learn useful tidy work in order that they may be able to beautify their own homes with the work of their own hands.

"The girls are trained in every department of household industry, kitchen, dining-room, teachers' room, etc. Our girls numbering but fifty, the matron and her assistants find time to give each girl individual care in the details of housekeeping, thus gradually inculcating and developing a sense of personal responsibility.

"Our boys do the bread baking for the school, while the girls in turn are taught how to bake and cook for a family. This special instruction in the art of cooking is given in the teachers' kitchen, the cooking for the teachers and employés being done by our native girls. They are also trained to wait upon the table, and they serve the teachers and guests with grace and manners. Our young boys are also trained in our school kitchen and dining room.

"Our pupils, from the children to the adults, sing with a spirit and understanding that outrivals many of the public schools.

"Our brass band of 20 members dispenses music for the school and for the town on public occasions.

"We have a military company of 35 members. The guns were kindly loaned us by the governor of the Territory.

"Lessons in patriotism are constantly inculcated. The Alaskans are a loyal, patriotic people. Rev. A. E. Austin, the veteran missionary of the school, has charge of the religious and devotional exercises."

The time has fully come when a normal department should be added to this important school, and a beginning be made in training native teachers.

2.—KADIAC DISTRICT.

As yet there is no contract school in this important district, but the establishment of one on Wood Island is urged by the teachers of the several day schools.

Prof. Duff, of Afognak, writes, under date of March 21, 1890: "We must have, and that very soon, an industrial school in this district, into which can be gathered and taught, the hundreds of orphans and neglected children. They are nearly all as white and as capable of improvement as the children of New England, or any other part of the country."

Prof. Roscoe, of Kadiak, writes, under date of September 29, 1890: "In every settlement through this part of the country may be found poor, defenseless children, clothed only in rags, with no one to provide suitable food or clothing, and living entirely on such charity as may be found among a heathen people. There are many destitute children, made so by the drunkenness and hence vagabond character of their parents. In addition to a kind of beer which the natives themselves make from sugar and graham flour, they succeed in buying large quantities of whisky from sailors and the more reckless class of traders. The salmon canneries are, generally speaking, a curse to the natives. The Chinese employés bring, or rather smuggle, immense quantities of "samshu" into the country, and peddle it out to the natives. In the Aleut settlement of Afognak, the natives have sold the very fur bedding from their huts to obtain this vile stuff. The winter is upon them, and until recently they had been so demoralized with liquor that they had not laid in the usual winter's supply of dried fish, their main subsistence. Without money and provisions and cloth-

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ing, what misery and want will there be in that village this winter, all because of intoxicating liquor!

"White hunters, recently arrived from the westward, tell me it is the same out there. The natives are demoralized by drink. Now, the future of this race is that, practically, they will perish from off the face of the globe unless they are Christianized—and that soon. It is a fact that the children do not generally show this terrible craving for strong drink. The pupils of my school are ashamed of their parents' drinking, and we never see them drink any. It seems, therefore, to be rather an acquired habit than an inherited appetite. It is only right and just that our Government take orphan children and inebriates' children and put them in a good industrial school under religious teachers, who, in addition to moral and intellectual training, will teach them the cultivation of the soil, the rearing of cattle, sheep, hogs, and poultry, the elements of some of the mechanical arts; and the girls the arts of sewing and cooking. Such a school can be and should be established in this vicinity."

The establishment of such a school is under consideration by the Woman's American Baptist Home Mission Society.

3.—UNALASKA DISTRICT.

The great distance of this district from the Bureau of Education, its remoteness from a post-office (2,500 to 4,000 miles), and its inaccessibility, portions of the field having communication with the outside world but once a year, have led to the very general establishment of contract schools in this section of Alaska. In these schools well-known missionary societies share with the Government the expense and responsibility.

Unalaska.—The ladies of the Woman's Home Missionary Society of the Methodist Church are raising funds for the establishment of a school at this point.

Carmel (Moravian, Rev. Frank E. Wolff, principal, with 4 assistants).—Boarding pupils, 20; day pupils, 15; Eskimo. Of the boarding pupils 14 were boys and 6 girls. It is expected that additional buildings will be erected by the opening of the next school year.

Bethel (Moravian, Rev. J. H. Kilbuck, principal, with 4 assistants).—Boarding pupils, 30; day pupils, 9; Eskimo.

With regard to the school, Rev. J. H. Kilbuck reports, under date of May 28, 1890: "This past school year has been our best, more scholars having been enrolled, and in consequence a better average attendance.

"The great drawback we find to be the running back and forth of scholars to their homes, which is not conducive to progress. We are compelled to acquiesce at present in order to hold scholars who have parents. The orphans, of course, we have full control of, and we keep them steadily at school.

"The migratory habits of the people are the root of irregular attendance. The parents as a rule take out their children to help them in getting food and fur. It is only during the season of rest that we can hope to keep a large number of scholars. Of course it is absolutely necessary that the boys be trained early to get their living, hence we can not seriously object to the parents taking their children for this purpose.

"There are instances where parents send their children to school for the sole purpose of having them clothed, and then take them away after a short stay. This, however, never occurred before this year, and we will see to it that it will not happen again.

"As regards behavior we can not complain. There was a case or two of immorality, but severe and speedy measures soon put an end to that, and the general conduct of the boys has been more manly. Several of the boys have been taking music lessons during the year. They have made reasonable progress under the teaching of Signor Weber.

"From the reports you will see that brother Weber has taught the school all winter. Whenever I was at home I kept the boys in in the evening, when I would give them general instruction in descriptive and physical geography and physiology. These evenings were pleasant to teachers and scholars, and many of the latter took a deep interest in the lessons.

"In speaking English the boys, as a rule, make but slow progress. We will have to resort to compulsory measures before they will take up English in earnest.

"As in other years, the boys help in fishing, getting wood, and sawing and splitting firewood, and in general work they are quite a factor. As play is more pleasing to boy nature than work, it sometimes takes a good command of patience to keep them busy. The boys learn to get their food, as they supply us

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with fresh meat during the winter and spring, with the aid of snares, powder, and shot, and traps."

Anvik (Episcopal, Rev. John W. Chapman, teacher).—Day pupils, 35; Indians.

During the summer of 1889, the school room was furnished with desks for 24 children, which to the gratification of the teacher, were filled. The progress of the scholars proved most satisfactory.

Rev. O. Parker writes, in connection with this school: "In closing this letter, I would say that both Mr. Chapman and I are still of the opinion that a boarding school is a necessary thing for the more successful carrying on of this work, and though we realize that a common school education should underlie all instruction in other branches, yet we feel it all necessary that mechanical branches should be taught as soon as possible. Perhaps a dozen boys' chests of tools and three or four sewing machines would enable us to make a beginning in that direction."

Kosoriffsky (Roman Catholic, Rev. P. Tosi, principal, with 6 assistants).—Boarding pupils, 29; Eskimo.

Nulato (Roman Catholic, Rev. A. Robaut, principal).—No report received.

Kingegan (*Cape Prince of Wales*), (Congregational, Messrs. H. R. Thornton, of Hampden Sidney, Va., and W. T. Lopp, of Valley City, Ind., teachers).—Population, Eskimo.

The teachers report: "The natives are peaceable, friendly, and intelligent, instead of ferocious, hostile, and stupid, as we were led to expect. We do not now entertain any fear of violence from them, and they already seem attached to us. In appearance they are a fine-looking set of people—robust and healthy—something like very good looking mulattoes, but with better features, and often brilliant color. In school they show as much intelligence as white children would under similar circumstances. We have now 65 pupils enrolled, although five-sixths of the population are absent on trading voyages. In fall, winter, and spring we think we shall have at least 300 pupils. This is the largest settlement on the coast and would form a valuable center of missionary work for the neighboring settlements at Port Clarence, the Diomede Island (middle of strait), Kotzebue Sound, Kings Island, etc.

The children are very sweet and attractive. We have never seen any signs of a fight or even a quarrel among them; nor have we seen any of them show any inclination to disobey their parents, a most remarkable fact, we think.

Point Hope (Episcopal, Mr. John B. Driggs, teacher).—Population Eskimo.

Point Barrow (Presbyterian, Mr. L. M. Stevenson, of Versailles, Ohio. teacher).—Population, Eskimo.

These last three schools are in Arctic Alaska, and will be noticed more at length later on in the report.

III.—OTHER SCHOOLS.

Unalaklik ("Swedish Evangelical Mission Covenant in America," Messrs. Axel E. Karlson and Aug. Anderson, teachers).—Pupils enrolled, 40 (31 boys and 9 girls); Eskimo.

Yakutat ("Swedish Evangelical Mission Covenant in America," Rev. Albert Johnson and Rev. K. J. Henrickson, teachers).—Population, Thlinget; pupils 30.

Nuklukahyet ("Church Missionary Society," London, England, Rev. and Mrs. T. H. Canham, teachers).—Population, Athabaskan Indians; pupils, 40.

This school was established in the summer of 1888, and has been taught in the Indian tongue. Drawing all of their supplies from England by way of Hudson Bay and across the continent by dog train the teachers have been much hampered by the want of suitable books and other facilities. Arrangements are in progress to transfer this mission to the Protestant Episcopal Mission Society of the United States and reorganize the school on an English speaking basis as one of the contract schools of this department.

Hoonah (Presbyterian, Rev. and Mrs. John W. McFarland, teachers).—Population, Thlinget; pupils, 126.

Juneau (Presbyterian, Rev. Eugene S. Willard in charge with 3 assistants).—Attendance, 21 Thlingets.

This is a home where these children are taken from their parents, or received as homeless waifs, and lodged, fed, clothed, and trained as in a Christian family. It is a practical exhibition of Christian philanthropy, and is accomplishing much good.

Juneau (Roman Catholic, Sisters of St. Ann, Sister Mary Zeno, superior, with 2 assistants).—Attendance, 40; mainly white children.

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Douglass City (Friends, Mr. and Mrs. S. R. Moon in charge).—No statistics received.

Jackson (Presbyterian, Mrs. A. R. McFarland in charge with 1 assistant).—This is a home similar to the one at Juneau.

St. Paul Island (North American Commercial Company, Simeon Milevedoff, teacher).—Population, Aleut; attendance, 50.

St. George Island (North American Commercial Company, Dr. A. L. Noyes, teacher).—Population, Aleut; attendance, 29.

This and the preceding school on St. Paul are the two that are maintained on the Seal Islands in accordance with the terms of the lease issued by the U. S. Treasury Department.

Through the influence of the priest of the Russo-Greek Church, the people are reluctant to have their children learn the English language.

Mr. Charles J. Goff, Treasury agent in charge of the Seal Islands, writes in his annual report to the Department: "Mr. Milevedoff was energetic and untiring in his efforts to advance the pupils, but there is very little interest taken by them in English speaking schools, so that there was but little progress made."

Russian.—In addition to the above are a number of Russo-Greek parochial schools, supported by the imperial Government of Russia, which will be enumerated in the tables of school attendance.

The statistics of these schools have been furnished by Mr. Ivan Petroff, special agent for Alaska of the Eleventh Census.

B.—Rules and Regulations for the Conduct of Schools and Education in the District of Alaska.

During the winter of 1890 the rules and regulations for the conduct of public schools in Alaska, approved by the Secretary of the Interior, June 15, 1887, were revised and amplified by the Commissioner of Education, and approved by the Secretary of the Interior, April 9, 1890, and are as follows:

By virtue of the power conferred upon the Secretary of the Interior by act of Congress of May 17, 1884, authorizing him to make needful and proper provision for the education of children of school age in the Territory of Alaska, without reference to race until such time as permanent provision shall be made for the same, the following rules and regulations for the government of the public schools in Alaska are hereby promulgated:

GENERAL MANAGEMENT.

SECTION 1. The general supervision and management of public education in Alaska is hereby committed to the Commissioner of Education, subject to the direction and control of the Secretary of the Interior.

SEC. 2. The Commissioner of Education is authorized—

(*a*) To appoint district superintendents and local school committees.

(*b*) To establish common schools in every settlement where there are children in sufficient number, and at least one school in every tribe or large settlement of the natives.

(*c*) To enter into agreement with missionary societies for the maintenance of boarding and industrial training schools, especially among the wild tribes and more inaccessible regions.

(*d*) To provide plans and contract for the erection of school buildings, and where necessary, residences for the teachers.

(*e*) To approve of the appointment of teachers and regulate the amount of their salaries.

(*f*) To provide necessary books and other school supplies.

(*g*) To make such recommendations to the Secretary of the Interior as the interest of education in Alaska may seem to require.

SUPERVISION.

SEC. 3. A superintendent of education, to be known as the general agent of education for Alaska, shall be appointed by the Secretary of the Interior, upon the recommendation of the Commissioner of Education, and shall hold the position during the pleasure of the Secretary, and until his successor be appointed. He shall receive from the Government for his services as general agent an annual salary of $1,200.

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SEC. 4. The general agent of education shall have a desk in the Bureau of Education; but during the six months of the year (summer) when it is possible to go from place to place in Alaska, he shall give his personal attention and supervision to the school work in the Territory.

SEC. 5. He shall be allowed necessary traveling expenses while on duty.

SEC. 6. It shall be the duty of the general agent to exercise special supervision and superintendence over the public schools and teachers in the Territory, subject to the approval of the Commissioner of Education.

SEC. 7. He shall have power, subject to the approval of the Commissioner of Education—

(*a*) To select and appoint the teachers of the public schools, to prescribe their duties, and to fix their salaries.

(*b*) To provide general rules for the government of the schools and the attendance of the children.

(*c*) To prescribe the series of text-books to be used in the public schools and to require all teaching to be done in the English language.

(*d*) To select the location of schoolhouses, to provide plans for the same, to draw up contracts for the erection of said buildings for the approval and signature of the Commissioner of Education, and to lease houses for school purposes.

SEC. 8. Requisitions for all materials for the erection of school buildings, articles of school furniture, supplies of books, stationery, and other necessary materials for the use of the schools shall be made by the general agent upon the Commissioner of Education, and when such requisitions are approved by the Commissioner they shall be transmitted to the Secretary of the Interior for his approval, and when approved by him the supplies will be purchased by the Commissioner of Education, and paid for as hereinafter provided.

SEC. 9. The general agent of education, at least three months in advance of the close of the scholastic year, shall submit to the Commissioner of Education detailed estimates of the probable necessary expenses for the support of the Territorial schools for the next fiscal year, including therein the erection of school buildings, the pay of school officers and teachers and other employés, traveling expenses of the general agent and the district superintendents, rents, fuel and lights, furniture, school books, apparatus, and all other necessary expenses for the maintenance of the schools.

SEC. 10. All salaries, expenditures, and other claims for the payment of educational expenses in Alaska must be audited by the general agent of education, or in his absence by the assistant agent (hereinafter provided for), approved by the Commissioner of Education, and when approved by him transmitted to the Secretary of the Interior for his approval, and when so approved, will be paid out of the funds appropriated by Congress for the education of the children of the Territory.

SEC. 11. In cases of special emergency the general agent, district superintendent, or local school committee, may incur expenditures for immediate necessary school purposes in advance of the approval of the Commissioner of Education, but such liabilities shall be only for unforeseen and necessary purposes, and shall in no case exceed $100.

SEC. 12. Whenever such extraordinary expense is incurred the general agent, superintendent, or local committee making the same, shall make an immediate report thereon in writing, to the Commissioner of Education, setting forth the reasons for incurring said expense, and transmitting properly signed and audited vouchers for the payment thereof.

SEC. 13. In the preparation of estimates, vouchers, and other official forms and papers, the blanks approved by the Treasury and Interior Departments shall be used.

SEC. 14. As far as possible the general agent shall visit each school district once in two years.

SEC. 15. The general agent shall make a report at the end of the school year to the Commissioner of Education, which report shall embrace—

(*a*) Number and general condition of all the schools in the Territory.

1. Public schools in—
   Unalaska district.
   Kadiak district.
   Sitka district.
2. Contract schools.
3. Other private and church schools.

(*b*) Rules and regulations prescribed by the general agent for the government of the schools and the duties of the teachers.

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(c) School census, monthly attendance, etc.
1. Census of population and of children of school age.
2. Statistics of enrollment, average attendance, etc.
3. Branches of study taught and number of pupils in each.
4. Other statistics when possible.

(d) Personnel.
1. General agent, district superintendents, school committees, and clerk; their pay.
2. Government school teachers and their pay.
3. School policemen and their pay.

(e) School houses.
1. The number, location, and seating capacity of the school buildings owned by the Government.
2. The number, location, seating capacity, and rental of rented buildings.
3. The number, location, seating capacity, and cost of school buildings erected during the year.

(f) Any and all information, suggestions, and recommendations that may be useful for the advancement of education in Alaska or that may be required by the Commissioner of Education.

SEC. 16. The Commissioner of Education is hereby authorized to employ a person, to be known as the assistant agent, at a salary of $100 per month, to be paid out of the fund appropriated by Congress for education in Alaska, whose duties shall be, under the direction of the general agent—

(a) To attend to the Alaska correspondence.
(b) To take care of the Alaska files.
(c) To keep the accounts with the Alaska fund.
(d) In the absence of the general agent to audit the accounts of the teachers.
(e) And to prepare Alaska papers, vouchers, etc., for submission to the Commissioner of Education, and in every possible way to assist the Commissioner and the general agent.

SCHOOL DISTRICTS.

The Territory of Alaska is divided into three school districts, which shall conform to the geographical divisions known as Sitka, Kadiak, and Unalaska, as follows:

SEC. 17. Sitka, comprising all southeastern Alaska, with an area of 28,980 square miles.

SEC. 18. Kadiak, comprising the region from Mount Saint Elias westward to Zakharoff Bay, with an area of 70,884 square miles.

SEC. 19. Unalaska, comprising the region from Zakharoff Bay westward to the end of Aleutian Islands and northward to the Arctic Ocean, with an area of 431,645 square miles.

SEC. 20. In the Sitka district the Commissioner of Education shall appoint a district superintendent of schools at a salary of $40 per month, and he shall hold the position during the pleasure of the Commissioner and until his successor be appointed.

SEC. 21. It shall be the duty of the district superintendent to exercise local supervision over the Government schools and teachers in his district.

SEC. 22. He shall visit all the schools of his district at least twice a year and keep the general agent informed of their condition and wants as to school buildings, repairs, and supplies, the manner in which teachers perform their duties, and make such recommendations as may seem important to the best interests of the schools.

SEC. 23. He shall make an annual report to the general agent of education of the condition of schools in his district.

SEC. 24. He may once a year hold a teachers' association at such time and place as in his judgment will best promote the interest of the schools.

SEC. 25. He shall be allowed necessary traveling expenses in the discharge of his official duties.

SEC. 26. Until the schools become more numerous and the means of communication more frequent, the general agent of education shall be ex-officio district superintendent of the Kadiak and Unalaska districts.

SEC. 27. In any village in Alaska containing a sufficient number of suitable persons the Commissioner of Education may at his discretion appoint three persons who shall act as a local school committee.

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SEC. 28. The duties of the school committee shall be—

(*a*) To visit and inspect the schools of the village, advise with the teachers, and make such recommendations to the district superintendent with regard to the schools as may seem proper.

(*b*) With the written approval of the Commissioner of Education, they shall provide fuel, make repairs on buildings, and purchase local supplies.

(*c*) If a school building is under contract in the village, it shall further be their duty to act at the building committee and see that the contractor fulfills his agreement. At the completion of the said building they shall examine the same and certify to the Commissioner of Education that the building has been erected and finished in accordance with the terms of the contract and in a workmanlike manner.

SEC. 29. The children shall be taught in the English language, reading, writing, arithmetic, geography, oral history, physiology, and temperance hygiene. No text-books printed in a foreign language shall be allowed. Special efforts shall be put forth to train the pupils in the use of the English language.

SEC. 30. All public schools shall be open to all children without reference to race.

SEC. 31. In suitable weather, at the opening of each school in the morning, a United States flag shall be raised, and at the close of school in the afternoon the the same shall be taken down.

SEC. 32. The Sitka training school shall teach the primary branches of industrial education. The boys shall be taught shoemaking, carpenter and cabinet work, printing, and such other trades as are of use in the Territory, while the girls shall be instructed in intelligent housekeeping and household industries.

Pupils in the Government day schools developing unusual aptness in learning and wishing increased advantages, shall be received into the Sitka training school upon the written request of the general agent or district superintendent.

The above "Rules and Regulations for the Conduct of Public Schools and Education in the Territory of Alaska," in sections numbered from 1 to 32, inclusive, are hereby approved to take effect July 1, 1890

JOHN W. NOBLE,
Secretary of the Interior.

Hon. W. T. HARRIS, LL.D.,
Commissioner of Education.
WASHINGTON, D. C., *April 9, 1890.*

TABLE 1.—*Enrollment and monthly attendance, 1889-'90.*

Station.	No. of days taught.	No. enrolled during year.	September.		October.		November.		December.	
			Total.	Average.	Total.	Average.	Total.	Average.	Total.	Average.
St. Paul, public day school	120	50	50	17	50	17	50	17	50	17
Unalaska, public day school	184	30	.....	.....	17	6	19	16	17	15
Urega, public day school	179	24	.....	.....	19	14	18	14	17	13
St. George, public day school	120	29	29	20	29	20	29	20	29	20
Auvik, contract school	102	35	.....	.....	.....	.....	.....	.....	31	21
Kozoriffsky, contract school	273	29	25	25	25	25	25	25	35	35
Bethel, contract school	150	39	35	25	29	26	31	26	31	25
Carmel, contract school	191	35	13	7	31	22	29	28	30	28
Unalaklik, Swedish school	157	40	.....	.....	30	29	30	23	30	26
Nuklukahyet, Episcopal school	200	40	.....	.....	.....	.....	.....	.....	.....	.....
Total, Unalaska district	1,676	351	.....	.....	.....	.....	.....	.....	.....	.....
Kadiak, public day school	196	67	42	21	55	40	52	37	53	32
Afognak, public day school	180	38	.....	.....	26	21	26	22	30	23
Total Kadiak district	376	105	.....	.....	81	61	78	59	83	55
Sitka No. 1, public day school	190	68	45	28	44	34	45	39	43	31
Sitka No. 2, public day school	190	83	33	13	34	13	34	20	35	16
Killisnoo, public day school	175	32	12	10	30	22	25	19	12	9

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TABLE 1.—*Enrollment and monthly attendance, 1889–'90*—Continued.

Station.	No. of days taught.	No. enrolled during year.	September.		October.		November.		December.	
			Total.	Average.	Total.	Average.	Total.	Average.	Total.	Average.
Juneau No. 1, public day school	136	33	28	25	26	21	23	20	20	18
Juneau No. 2, public day school	192	51	19	13	27	21	28	25	30	23
Douglas No. 1, public day school	165	50								
Douglas No. 2, public day school	192	92	57	23	46	20	41	21	45	27
Wrangell, public day school	192	84	36	25	50	30	52	35	49	40
Klawack, public day school	80	66								
Jackson, public day school	189	87	45	27	51	26	91	32	80	54
Metlakahtla, public day school	169	179	112	52	148	88	146	96	151	101
Sitka, contract school	261	164	148	136	150	138	150	138	150	138
Hoonah, Presbyterian school	155	126			12	10	80	50	100	68
Juneau, Presbyterian school	200	21	21	20	21	20	21	20	21	20
Juneau, Roman Catholic school	205	40								
Douglas, Friends school										
Jackson, Presbyterian school	200	25								
Yakutat, Swedish school	312	30	3	3	3	3	3	3	2	2
Total, Sitka district	3,093	1,231								
3 Russo-Greek parochial schools		101								
Total reported	5,145	1,788								

Station.	January.		February.		March.		April.		May.	
	Total.	Average.	Total.	Average.	Total.	Average.	Total.	Average.	Total.	Average.
St. Paul, public day school	50	47	50	17	50	17	50	17		
Unalaska, public day school	16	10	14	13	14	12	19	11	14	11
Unga, public day school	16	10	16	12	17	12	20	12	18	15
St. George, public day school	29	20	29	20	29	20	29	20		
Anvik, contract school	33	17	31	15	24	11	27	14		
Kosoriffsky, contract school	27	26	27	26	27	26	29	28	29	28
Bethel, contract school	22	19	28	22	26	23	19	17		
Carmel, contract school	30	24	28	23	23	20	26	17	23	17
Unalaklik, contract school	40	36	40	37	33	30	19	17		
Nuklukahyet										
Total Unalaska District										
Kadiak, public day school	50	28	45	30	51	34	51	25	50	35
Afognak, public day school	30	25	31	25	28	23	28	24	24	20
Total Kadiak District	80	53	76	55	79	57	79	49	74	55
Sitka, No. 1, public day school	42	20	40	25	34	21	34	17	58	22
Sitka, No. 2, public day school	33	18	27	9	30	19	33	11	26	
Killisnoo, public day school	9	7	24	19	23	18	25	20	11	8
Juneau, No. 1, public day school	22	18	32	21	32	20	32	23	24	7
Juneau, No. 2, public day school	33	29	34	26	31	26	32	25	30	24
Douglass, No. 1, public day school			23	20	23	20	23	20	25	20
Douglass, No. 2, public day school	35	17	3		30	18	29	20	25	21
Wrangell, public day school	30	23	13	12	17	15	18	15	20	17
Klawack, public day school							30	16	66	20
Jackson, public day school	77	37	41	22	35	19	32	15	24	14
Metlakahtla, public day school	165	83	129	72	100	39	99	42	59	28
Sitka, contract day school	145	140	145	140	145	140	164	148	164	148
Hoonah, Presbyterian school	100	67	90	65	50	40				
Juneau, Presbyterian school										
Juneau, Roman Catholic school										
Douglass, Friends' school										
Jackson, Presbyterian school										
Yakutab, Swedish school	28	20	2	2						
Total Sitka District										
Russo-Greek parochial schools										
Total reported										

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TABLE 2.—*Number in sundry branches of study.*

	Primary chart.	First and second readers.	Third and fourth readers.	Spelling.	English language lessons.	Geography.	Arithmetic.	Grammar.	Drawing.	Physiology.	Temperance hygiene.	United States history.	Writing.	Use of tools.	Sewing.	Number of classes.
Public day schools.																
Sitka:																
No. 1	6	17	9	33	----	19	34	8	----	21	----	5	31	----	----	20
No. 2	23	11	1	35	35	----	35	----	----	----	----	----	35	----	----	18
Juneau:																
No. 1	5	8	16	24	24	17	28	2	10	----	12	3	28	----	----	26
No. 2	12	17	----	17	35	----	22	----	35	----	3	----	35	----	----	19
Douglas:																
City, No. 1	12	12	11	11	10	10	16	11	23	10	10	----	11	----	----	20
City, No. 2	16	29	7	11	7	7	13	----	23	----	----	2	13	----	----	20
Killisnoo	20	8	2	4	1	4	30	2	30	----	2	2	30	----	----	9
Wrangell	4	29	19	52	14	24	52	----	52	----	23	----	52	----	28	11
Jackson	21	26	25	51	80	4	45	4	80	4	4	4	80	----	----	26
Klawack	28	35	4	----	----	----	22	----	----	----	----	----	46	----	----	12
Kadiak	16	21	18	55	53	6	55	6	55	----	18	----	55	32	----	7
Unga	4	5	11	16	8	4	16	----	15	----	9	----	15	----	----	20
Unalaska	----	14	6	14	8	14	14	----	----	----	8	----	14	----	----	12
Afognak	9	11	4	28	28	4	2	----	28	----	28	4	28	18	----	12
Metlakahtla	60	64	41	165	165	41	165	----	----	----	----	165	165	----	----	4
Contract schools.																
Anvik	28	2	----	9	9	3	2	----	24	----	----	----	12	----	----	10
Kosoriffsky	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Bethel	24	10	1	35	34	----	35	----	----	----	----	----	35	----	4	5
Carmel	21	10	----	10	----	----	31	----	----	----	----	----	31	----	6	9
Sitka	12	108	9	148	144	68	148	2	100	57	164	9	148	75	60	35

TABLE 3.—*Table showing highest enrollment 1885-1890.*

	1885-86.	1886-87.	1887-88.	1888-89.	1889-90.
Public schools.					
Sitka:					
No. 1	51	55	60	51	68
No. 2	----	70	71	46	83
Juneau:					
No. 1	75	93	25	29	33
No. 2	----	----	67	47	51
Douglas City:					
No. 1	----	----	67	52	50
No. 2	----	----	----	----	92
Killisnoo	50	58	44	22	38
Wrangell	70	89	106	59	84
Jackson	87	96	110	91	87
Klawack	----	124	81	31	66
Hoonah	165	70	136	----	126
Kadiak	----	37	81	52	67
Unga	----	20	25	----	24
Unalaska	45	----	----	----	30
Kurluk	----	----	----	----	----
Afognak	----	30	24	47	38
Contract schools.					
Sitka	----	100	186	170	164
Bethel	----	13	17	26	39
Carmel	----	----	21	20	31
Nulato	----	----	----	----	----
Kosoriffsky	----	----	----	----	29
Anvik	----	----	----	30	35
Metlakahtla	----	----	170	166	179

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CONTRACT SCHOOLS.

TABLE 4.—*Amount contributed by the churches to supplement the work of the Government. Amount apportioned by the Government to the contract schools for 1891-92.*

Denominations of schools.	Value of buildings and plant erected by the church.	Number of teachers and employés.	Number of children fed, clothed, lodged, and taught.	Number of day pupils.	Paid out by church during 1890.	Paid out by the church during 1890 in addition to the amount received from Government.	Appropriated by the Government to the schools for 1891.	Total to the denomination.	Pro rata for boarding pupils based on the attendance of 1890.*
Presbyterian	$95,000	37	210	126	$39,346	$22,346			
Sitka			164				$10,000		
Juneau			24						
Hoonah				126			3,000	$15,000	$59.52
Jackson			22						
Point Barrow							2,000		
Roman Catholic		10	29		2,500				
Kosoriffsky							1,500		
Nulato							500	2,500	82.75
Vancouver							500		
Prostestant Episcopal	5,000	3		35	6,000	3,000			
Anvik				35			1,000	3,000	250.00
Point Hope							2,000		
Moravian	11,000	10	50	10	8,412	6,412			
Bethel							1,500	2,500	47.17
Carmel							1,000		
Methodist Episcopal	1,102	2		54	2,207	1,007			
Unalaska				30			1,000	2,000	111.11
Unga				24			1,000		
Congregational	3,000	2		60	5,491	3,491			
Cape Prince Wales	3,000						2,000	2,000	100.00
Swedish Evangelical	7,500	4		70					
Unalaklik				40			1,000	1,500	62.50
Yakutat				30			500		
Reformed Episcopal									
St. Lawrence Island					3,000	2,000	1,000	1,000	

*Three-day pupils are considered as equivalent to one boarding pupil.

D.—PERSONNEL, SALARIES, ETC.

General agent of education for Alaska, Dr. Sheldon Jackson, Alaska, $1,200.

BOARD OF EDUCATION.[1]

Name.	State.	Salary.
Governor Lyman E. Knapp	Vermont	$200
Judge John H. Keatley	Iowa	200
Hon. James Sheakley	Pennsylvania	200
Dr. Sheldon Jackson	Alaska	200
Mr. William Duncan	do	200

TEACHERS OF PUBLIC SCHOOLS.

Name of teacher.	State.	School.	Salary.
John A. Tuck	Maine	Unalaska	$1,000
John H. Carr	Washington	Unga	1,000
W. E. Roscoe	California	Kadiak	1,000
John Duff	Illinois	Afognak	1,000
Anna D. Beatty	New York	Sitka, No. 1	720
Gertrude Patton	Pennsylvania	Sitka, No. 2	720
May Ransom	California	Killisnoo	720
Rhoda A. Lee	New York	Juneau, No. 1	900
Cassia Patton	Pennsylvania	Juneau, No. 2	720
Mrs. W. S. Adams	Alaska	Douglass, No. 1	720
C. H. Edwards	Kansas	Douglass, No. 2	720
Mrs. W. G. Thomas	West Virginia	Fort Wrangell	900
H. C. Wilson	Ohio	Klawack	1,000
Clara A. Gould	West Virginia	Jackson	900

[1]In the new rules and regulations approved by the Secretary of the Interior April 9, 1890, this Board created in 1887 was discontinued, experience having proved that it did not work well, and a system of local school committees was inaugurated.

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TEACHERS AND EMPLOYÉS IN CONTRACT SCHOOLS.

Anvik (Episcopal).—Rev. John W. Chapman, Vermont.
Point Pope (Episcopal).—John B. Briggs, M. D., Delaware.
Kosoriffsky (Roman Catholic).—Rev. Paschal Tosi, Mr. B. Cunningham, Mr. John Negro, Sister Mary Stephen, Sister Mary Joseph, Sister Mary Paulina.
Cape Vancouver (Roman Catholic).—Rev. Joseph Treca, Rev. Paul Muset, Mr. John Rosati.
Nulato (Roman Catholic).—Rev. Robaut, Rev Ragaru.
Bethel (Moravian).—Rev. John H. Kilbuck, Rev. Ernst L. Weber, Mrs. John H. Kilbuck, Mrs. E. L. Weber, Miss Lydia Lebus.
Carmel (Moravian).—Rev. Frank E. Wolff, Mrs. F. E. Wolff, Miss Mary Huber, Miss Emma Huber, Rev. J. A. Schoechert.
Cape Prince of Wales (Congregational).—Mr. H. R. Thornton, of Virginia; Mr. W. T. Lopp, of Indiana.
Point Barrow (Presbyterian).—Mr. Leander M. Stevenson, of Ohio.
Sitka (Presbyterian).—Mr. William A. Kelly, principal, Rev. A. E. Austin, chaplain, Mrs. A. E. Austin, Miss Anna R. Kelsey, Miss Mate Brady, Mr. J. A. Shields, Miss Carrie E. Delph, Miss Ida M. Rogers, Miss Kate A. Rankin, Mrs. A. T. Simson, Mr. A. T. Simson, Mrs. M. C. Devore, Mrs. Josie Overend, Mr. Ernest Struven, Mrs. Tillie Paul (native), Mr. William Wells (native), Mr. Edward Marsden (native), William F. Arnold, M. D.
Metlakahla.—Mr. William Duncan, teacher, with several native assistants.

TEACHERS IN PRIVATE AND CHURCH SCHOOLS.

Unalaklik (Swedish Evangelical).—Rev. Axel E. Karlson, Aug. Anderson.
Yakutat (Swedish Evangelical).—Rev. Alb. Johnson, Rev. K. J. Henrickson.
Hoonah (Presbyterian).—Rev. John W. McFarland, Mrs. M. D. McFarland, Miss Dora Davis (native).
Juneau (Presbyterian).—Rev. Eugene S. Willard, Mrs. E. S. Willard, Miss Elizabeth Matthews, Miss Margaret Dunbar, Rev. S. H. King, Mrs. S. H. King.
Jackson (Presbyterian).—Mrs. A. R. McFarland, Miss C. A. Baker, Rev. J. Loomis Gould, Mrs. J. L. Gould.
Juneau (Roman Catholic).—Rev. John Althoff, Sister Mary Zeno, Sister Mary Peter, Sister Mary Bousecouer.
Douglas (Friends).—Mr. S. R. Moon, Mrs. S. R. Moon, Mr. E. W. Weesner, Mrs. E. W. Weesner.
North American Commercial Company.—Simeon Milevedoff, St. Paul Island; A. L. Noyes, M. D., St. George Island.

E.—SCHOOL BUILDINGS.

During the year a comfortable frame schoolhouse and teacher's residence combined, 31 by 55 feet in size, were erected at Kadiak, Karluk, and Afognak, at a cost of $2,700 each; at Douglas a substantial frame schoolhouse, 20 by 30 feet in size, at a cost of $1,200, and at Chilkat a log schoolhouse, 20 by 30 feet in size, for $350.

EDUCATION IN THE EAST.

Of the Alaskan children at Eastern schools, Miss Frances Willard graduated in June, 1890, at a young ladies' seminary at Elizabeth, N. J. She will return to Alaska this summer, and be appointed assistant teacher in the industrial school at Sitka.

Mr. Frederic Moore, of the Hoochinoo tribe, whom I brought East in the fall of 1886, and placed in the school at Mount Hermon, Mass., will also return to Alaska this season as Government teacher of the school at Hoonah.

In the fall of 1887, at the expense of Mrs. Elliott F. Shepard, of New York, I brought to Eastern schools Frederic Harris, Henry Phillips, Minnie Shotter, Flora Campbell, and Florence Wells, native children, and Olga Hilton (Russian) from the industrial school at Sitka, and Blanche C. Lewis, native, from Fort Wrangel.

The two boys were placed in the Indian training schools at Carlisle, Pa., and the five girls at the young ladies' seminary, Northfield, Mass.

Frederic Harris, after making good progress in his studies and in learning the

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tinsmith business, was taken sick from peritonitis, and died in the school hospital on the 10th of June, 1890.

Henry Phillips, having learned the printer's trade, has now gone into the machine shop, where he is making good progress.

Florence Wells, Blanche Lewis, and Olga Hilton are still at Northfield. Flora Campbell has been changed from the school at Northfield to one at Orange, N. J., where she is receiving drill as a kindergarten teacher.

Minnie Shotter having developed a weakness in her eyes, will return home to Douglas, Alaska, where she will teach instrumental music.

This coming fall, David Skuviuk and George Nocochluke, Eskimo boys from the Kuskoquim Valley, will be taken East by Mrs. Bachman, and placed in the Indian training school at Carlisle, Pa.

George and William Fredericks, of the Yukon Valley, will be sent by the Episcopalians to the Episcopal Institute at Burlington, Vt., Edward Marsden of the Presbyterian training school at Sitka, to Marietta College, Ohio, and Shawan Sheshdaak of Fort Wrangel, to the Educational Home at Philadelphia.

Through the liberality of Mr. Rudolph Neumann of the Alaska Commercial Company, I have arranged to send to the California normal school for teachers at San Jose, Miss Mattie Salamatoff, orphan daughter of a former Russo-Greek priest at Belkoffsky.

When Alaska secures much needed laws to increase regular attendance of the native children at school, then there will be room and a call for many native teachers.

SCHOOLS ESTABLISHED IN ARCTIC ALASKA.

In the extension of the school system over all Alaska a commencement has been made within the Arctic Circle. Contract schools have been established at Point Barrow, Point Hope, and Cape Prince of Wales, the three principal villages on the Arctic coast of Alaska.

This commencement involves much that is new and unusual in school work. The location of the schools is in a region so remote and inaccessible that they are outside the world's commerce. In August, when the ice will permit, a few whalers sail by, and a United States revenue marine steamer makes an annual call, bringing the yearly mail and supplies. With the departure of the steamer the settlement is cut off for another eleven months from the world. There are years, however, when the northernmost school, Point Barrow, can not be reached at all during the season, and the teacher will be two years without a mail or a fresh supply of provisions. And there is always the liability that a succession of severe seasons will isolate him for several years.

Under the shadow of this possibility it is a relief to know that at this station, where the greatest danger is, the Government has a refuge station for shipwrecked whalers, with provisions in store sufficient to last 20 men 5 years. If this supply should be exhausted before relief came, the teacher would be compelled to adopt the diet of the country, to wit, whale blubber and seal meat.

The food, clothing, and supplies for the teachers and the supplies for the schools must needs be taken annually on a Government vessel or a chartered schooner from San Franciso, between 3,000 and 4,000 distant.

In an area as large as all of the New England and Middle States combined, the three schools recently established occupy only the strategic places, separated hundreds of miles from each other. They are the central points from which future schools may be established.

The location of these schools in a region where the winter term is one long night presents new problems. The constant need of lamps in the schoolroom is a matter of course. But a greater difficulty is experienced in the confusion of time which arises from the absence of the sun to mark the alternate periods of day and night.

Without a marked difference in the light between noon and midnight, all knowledge of time among a barbarous people becomes lost. They know no difference between 9 o'clock a. m. and 9 o'clock p. m. Consequently, when the school bell rings out into the Arctic darkness at 9 o'clock a. m. some of the pupils have just gone to bed, and are in their first sound sleep. Roused up and brought to the schoolroom, they fall asleep in their seats. Many of the pupils have come to school without their breakfasts; with sleepy bodies and empty stomachs they are not in the best condition to make progress in their studies. Then, bearing in mind the fact that these children are wholly undisciplined and unaccustomed to restraint, the greatness of the task before the teacher begins to be appreciated.

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The schools are for the Arctic Eskimo, with their strange tongue and unwritten language. Consequently at the opening of school the teacher could not understand what the pupils said or the pupils understand the instruction of the teacher. In two or three schools the teachers were unable to secure interpreters.

The schools being located among an uncivilized and barbarous people, living in earth huts and disregarding all the laws of health, it became necessary, not only to erect the schoolhouse, but also the teacher's residence, and, as far as possible, make both cold-proof with double walls, floor, and roof.

The materials for these houses had to be taken from San Francisco on a chartered vessel, landed through the breakers on a coast without a harbor, and carried on the shoulders of men and women to the site of the buildings.

Again, the schools were located among a people who were not only uncivilized, but also were reported by the whalers to be savages. At one of the stations whalers have for years been afraid to drop anchor lest they should be attacked and murdered by the natives. At that station two young men are in charge of the school. They are the only white men in that region and thousands of miles from troops or even a policeman. Further, the schools are located among a famishing population where the teachers have to do not only with the intellectual training, but also with the physical well-being, the general uplifting of the whole population out of barbarism into civilization. This involves questions of personal cleanliness, health, diet, improved habitations, drainage, and above all at present an increased food supply. The people are on the verge of starvation, and the schools must provide and instruct them in new industries which will furnish a better support.

As the schools will necessarily be much of the time out of the reach of control and supervision, the coöperation of well-known and responsible missionary organizations was sought, with the result that the American Missionary Association of the Congregational Church took charge of the school at Cape Prince of Wales, on Bering Straits, the Episcopal Missionary Society the one at Point Hope, and the Presbyterian Home Missionary Society the one at Point Barrow.

The money for the establishment of the school at Point Barrow and the erection of the buildings was contributed by Mrs. Elliott F. Shepard, of New York; that for Cape Prince of Wales by the Congregational Church of Southport, Conn.

Cape Prince of Wales is the most western school in America, and Point Barrow the most northern. Point Barrow is farther north than the celebrated North Cape of Europe. These schools are assisted by the United States Bureau of Education. While negotiations were in progress with the missionary societies, an appeal was published in a number of the newspapers of the United States for volunteer teachers for the schools to be established at Point Barrow and Cape Prince of Wales. The call set forth the facts that the schools were beyond the pale of civilization, where communication with the outside world could be had but once a year; that they were among a barbarous and perhaps savage people, where the risks were so great that ladies would not be allowed to go, and where the lives of the men would not be guarantied. Notwithstanding the hazardous and trying nature of the work, there were 24 applicants for the schools, some 12 of whom were ladies.

Prof. L. M. Stevenson, of Versailles, Ohio, was selected for Point Barrow; Dr. John B. Driggs, of Delaware, for Point Hope; and Mr. H. R. Thornton of Hampden Sidney, Va., and Mr. W. T. Lopp, of Valley City, Ind., for Cape Prince of Wales.

A vessel, the *Oscar and Hattie*, was chartered at San Francisco to take up the materials for the buildings and supplies for the teachers and schools. The teachers found passage as far as Port Clarence, Bering Sea, on the steamer *Jennie*, tender to the whaling fleet, and from Port Clarence to destination on the whalers.

I was kindly furnished transportation on the U. S. R. M. S. *Bear*.

At noon on the Fourth of July the *Bear* dropped anchor in the open roadstead off the village Kingegan, Bering Straits. That afternoon, on the shores separating the Arctic Ocean from Bering Sea, and in front of the snow-capped mountains of Asia, plainly visible for miles, we celebrated our Fourth of July by laying the foundations of the first public-school building in Arctic Alaska.

Upon the completion of the school building the *Bear* weighed anchor, sailed through Bering Straits into the Arctic Ocean, and 200 miles to the northward dropped anchor under the light of the midnight sun at Point Hope.

Here again all hands that could be spared were sent ashore to work at the

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school building. After completing the building we again turned our faces toward the North Pole.

After various detentions by the great ice field of the Arctic, on the 31st day of July we reached Point Barrow, over 800 miles north and east of Bering Straits. The next day, running before a gale, we rounded the northern end of the continent and anchored on the eastern side of the Point.

On the northernmost bluff of the continent was established probably the northernmost school in the world.

SUPERVISION.

Through the special permission of Hon. William Windom, Secretary of the Treasury, and the courtesies of Capt. L. G. Shepard, Chief of the Revenue Marine Service, Capt. M. A. Healy, commanding the U. S. R. M. S. *Bear*, and Capt. A. C. Coulson, commanding the U. S. R. M. S. *Rush*, I was able to inspect, for the first time in four years, the schools at Afognag, Kadiak, Unga, and Unalaska, and also visit the settlements on the Bering Sea and Arctic coasts of Alaska.

Mr. Windom, in furnishing me with transportation, recognized the fact that the revenue vessels visiting the native settlements of Alaska had, "in addition to routine duties, the philanthropic work of caring for and assisting the native peoples."

In a letter concerning the trip he says: "The ordinary duties of the revenue marine have been greatly augmented on the North Pacific and Arctic station by the service which it renders in affording aid and protection to the natives, who are often in peril and distress from the rigors of the climate, the exposed condition of the country, and their lack of knowledge in the ways of civilization. The service is doing good missionary work, and is an important factor among the instruments which are being utilized to improve the interests of these people."

The trip of the U. S. R. M. S. *Bear* was the ordinary annual cruise of one of the U. S. Revenue Marine steamers in Alaskan waters.

Season after season she goes north in the spring to enforce the revenue laws and practically do police duty around the seal islands of Bering Sea and the native settlements stretching from Kadiak 1,500 miles to Attu, and from Unalaska 1,200 miles northward to Point Barrow. In vast stretches of coast (from 10,000 to 12,000 miles is a season's cruise), unknown to civilization, the flag of the revenue steamer is the only evidence of the authority of the Government ever seen and the only protection afforded. When Capt. Healy commenced cruising in these waters, schooners loaded with rum, were visiting every native settlement along the vast coast, and even some of the whalers were not above trafficking in the accursed stuff. The temptations were great, when a bottle of whisky would purchase $200 worth of furs, and the profits were a thousand fold. At that time intemperance was threatening the extinction of the native race. Through the vigilance and tact of Capt. Healy this trade has been almost entirely broken up.

It is also the duty of the revenue cutter, as far as possible, to be on hand to assist when disaster or shipwreck overtakes the whalers, to search after missing vessels, to note the bearing of different points of land, islands, etc., to determine the position of all bars and reefs encountered, to keep a record of tides and currents, to take meteorological and astronomical observations for the benefit of commerce, to investigate scientific phenomena, and inquire into the mode of life, political and social relations of the native population, and make collections for the Smithsonian Institution, and to perform many other services beneficial to commerce, science, and humanity.

This year, in addition to the ordinary routine, the commanding officer is charged with several special duties. In 1887-'88, Congress voted $1,000 for presents to the natives near Cape Navarin, Asia, as a reward for having fed and cared for some American sailors wrecked on their coast. These presents were to be distributed on this trip.

Then, scattered through Bering Sea and the Arctic Ocean are islands and lands so remote and inaccessible that the ordinary census taker can not reach them; hence the commanding officer of the revenue cutter was appointed a special agent for the taking of the Eleventh Census in those places. This gave me an opportunity of visiting these little known regions.

Again, the steamer was charged with the duty of conveying the material for a storehouse and a supply of provisions for the Government refuge station at Point Barrow; and last, but not least, the commanding officer was authorized to

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furnish such assistance as he could in the erection of school buildings at Cape Prince of Wales and Point Hope, and give the general agent of education for Alaska every facility for visiting the native settlements on the coast.

At 4 o'clock on the morning of the 3d of June, 1890, we steamed out of the harbor of Seattle. At 9 o'clock that evening we swept by the light-house at Cape Flattery and passed out to sea.

For nine days and nights we sailed steadily west, without seeing land or sail and scarcely a bird or fish. On the evening of June 12 land was sighted, which proved to be Unimak Island. The next morning, rising early, we were passing through Akutan Pass. The storm and fogs and rough waves of the preceding days were gone; the water was as quiet as a millpond. Pinnacles of rocks, isolated and in groups, were to the right and to the left of us; bold headlands thousands of feet in height; mountain slopes covered with mosses of every variety of shade and great patches of snow; volcanoes with their craters hid in the clouds were on either side, and all lighted up by the morning sun made a scene of surpassing loveliness and beauty. In due time we swept by Cape Erskine, rounded Priests Rock, and were in Unalaska Bay. Twelve miles up the bay and we were at Iliuiuk, better known as Unalaska, the commercial metropolis of the Aleutian Islands and Bering Sea.

The Aleutian Archipelago consists of a narrow chain of islands, extending from the end of the Alaskan Peninsula in a general westerly direction for a thousand miles to Attu, the westernmost limit of the land possessions of the United States. This chain of islands separates Bering Sea from the Pacific Ocean, and gives coloring to the Russian claim of a "closed sea."

The discovery of these islands by Europeans is due to the unbounded ambition of Peter the Great of Russia, who, having founded a Russian empire in Europe and Asia, would also found one in America.

The western coast of America had been explored as far as Cape Mendocino, California, but from California north it was a vast unknown region—"the great northern mystery, with its Anian strait and silver mountains and divers other fabulous tales."

To solve these mysteries, to determine whether Asia had land communication with America, to learn what lands and people were beyond his possessions on the eastern coast of Siberia, and to extend his empire from Asia to America, Peter the Great, in 1724, ordered two expeditions of exploration and placed them both under the command of Vitus Bering, a Dane in the Russian service. The expedition set out overland through Siberia on January 28, 1725, under Lieut. Chirikoff.

Three days later the Emperor died, but the expeditions were energetically pushed by his widow and daughter. The first expedition, from 1725 to 1730, explored Bering Straits, and settled the question of separation between Asia and America.

The second expedition was fitted out by the Empress Catharine, and consisted of two vessels, the *St. Paul*, commanded by Bering himself, and the *St. Peter*, in charge of Alexei Ilich Chirikoff, second in command. The expedition was accompanied by several scientists and sailed from Avatcha Bay, Kamtschatka, on June 4, 1741. This ill-fated expedition discovered the mainland of Alaska and the Aleutian Islands. But the remnant that brought back the news of the discovery of northwestern America, also brought with them the beautiful furs of the sea otter, and wide-awake merchants were not slow to see their opportunity. As the adventurous hunt for the little sable had led the hardy Cossack and extended Russian dominion from the Ural Mountains across Asia to Kamtschatka and Bering Sea, so now the hunt for the sea otter was to extend Russian settlement 2,000 miles along the coast of America.

A few months after the return of Bering's expedition in the spring of 1743, Emilian Bassof formed a partnership with a wealthy Moscow merchant, built a small vessel named the *Kapiton*, and commenced the fur trade of the newly discovered islands. On his second trip, in 1745, he collected 1,600 sea otters, 2,000 fur seals, and 2,000 blue Arctic foxes.

This was the commencement on the part of the merchants of Siberia of a mad race after the furs of Alaska—a race so mad that they could not wait the securing of proper materials for the building of safe vessels and the procuring of trained seamen. Boats were hastily constructed of planks fastened together with raw hide or sealskin thongs. In these unseaworthy boats, without charts or compass, they boldly ventured to sea, and the half of them found a watery grave. Those that did return in safety with a fair cargo received from 2,000 to 3,000 roubles each as their share of the profit.

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On the 26th of September, 1745, for the first time the discharge of firearms was heard on the Aleutian Islands. A native was shot on the island of Agoto by a party of Russians under Chuprof.

Then commenced a reign of lust, robbery, and bloodshed, which lasted for 50 years. One Feodor Solovief is reported to have alone killed 3,000 Aleuts. Veniaminof, who was the leading Greek priest and first bishop in Alaska, declares that during that dreadful period Aleuts were used as targets for Russian practice in firing; that one Solovief, finding the inhabitants of several of the Unalaska villages assembled on Egg Island, made an attack, slaughtering men, women, and children, until the sea was covered with the blood of the slain.

One Lazaref threw over precipices, cut with knives, and split open with axes a number of Aleuts.

Whole villages were massacred by the Russians, so that Lieut. Sary, chief of the Russian navy, who accompanied Capt. Billings's expedition in 1790, declares that it was a very moderate estimate to place the number murdered at 5,000.

This first half-century of Russian occupation can be roughly summarized as follows: On the credit side, from $15,000,000 to $20,000,000 worth of furs; on the debit side, thousands of Russians drowned, died of scurvy, and killed by natives, and thousands of natives needlessly murdered by the Russians.

A better day dawned for the poor natives of Alaska in the coming of Grigor Ivanovich Shelikof, a merchant of Okhotsk, who has been justly styled the founder of the Russian colonies in Alaska. He introduced reforms in the methods of hunting, redressed abuses, formed permanent settlements, and procured concessions and power from the Emperor.

The work commenced by him was afterwards enlarged by Alexander Baranof.

The largest and most important of the Aleutian Islands is Unalaska. This island is 120 miles long and 40 wide. It contains three separate groups of mountains. It also has an active volcano, Makushin, 5,474 feet high. From a cave at the southern end of the island were taken eleven mummies for the Smithsonian Institution.

It also possesses several deep bays, of which Unalaska is one of the longest. In their season codfish, salmon, halibut, and herring abound in those waters.

The island was first sighted by Lieut. Chirikof, of Bering's expedition, on the 4th of September, 1741. The first landing was made by a merchant of Turinsk, Stepan Glottof, in the vessel *Yulian*. This was in the fall of 1759. Glottof gave the world the first map of that region, and is said to have baptized many of the natives into the Greek faith.

To the average American the Aleutian Islands seem so remote, and concerning them so little is known, that but few think of them as having been the theater of stirring events and as having a history extending back one hundred and fifty years, but such is the case.

Unalaska shares with the other islands in that history. For thirty years it was a struggle between the rapacious, cruel, and bloody fur-trader and the Aleuts striving to preserve their homes and freedom. The end was the complete subjugation of the natives.

In January, 1762, a party of fur hunters, under the leadership of Golodof and Pushkaref, landed upon the island. Owing to their excesses against the natives, several were killed and the rest fled the island the following May. But the island was too rich in furs to be given up. That same fall another party came under the leadership of Drushinnin. Outraging the natives, the latter commenced on the 4th of December a series of attacks which resulted in the breaking up of the Russian settlement, only 4 out of 150 men escaping with their lives.

In August, 1763, Capt. Korovin, of the vessel *St. Troitska*, formed a settlement. This also was broken up by the natives.

In 1764 Capt. Solovief formed a settlement. His stay on the island was marked by such bloody atrocities that the few who survived were completely subjugated. His name has come through a hundred years of local tradition as the synonym of cruelty. Among other things, it is said that he experimented upon the penetrative power of his bullets by binding 12 Aleuts in a row and then firing through them at short range. The bullet stopped at the ninth man.

In 1770, when the American colonists were preparing themselves for the struggle for independence, the struggle of the Aleuts was ending. They had given their lives in vain. The few who were left could no longer maintain the unequal conflict and were reduced to practical slavery.

But Unalaska has since seen better days and been visited by a better class. On the 16th of September, 1768, Capt. Levashef, in charge of a Russian scientific expedition, dropped his anchor and wintered on the island.

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In 1778 it was visited by the celebrated Capt. Cook with his ships *Resolution* and *Discovery*. On the 21st of July, 1787, Capt. Martine, in command of two Spanish vessels on a tour of exploration, landed and took possession of the island in the name of the King of Spain.

In 1709 Unalaska was visited by one of the most remarkable men of the day, Alexander Baranof, who was to rule Alaska for the next twenty-eight years, bring order out of confusion, and, carrying out and enlarging the plans of the merchant Shelikof, create a Russian empire in America.

On the 30th of September of that year, the ship *Trekh Sviatiteli*, upon which he had embarked for Kadiak Island, was wrecked and he was compelled to spend the winter at Unalaska. He improved his time by studying the character of the people with whom he had to deal, and forming the plans which he afterwards so successfully executed. In 1808 a rude log chapel was erected for the worship of the Greek Church. This was torn down in 1826 and a better church built in its place. In or about 1795 a Greek priest, Father Makar, took up his abode on the island, and had great success in baptizing the natives.

He was followed in 1824 by Innocentius Veniaminof, who was made bishop of all Alaska in 1840. He was subsequently recalled to Russia and made metropolitan of Moscow, the highest ecclesiastical position in the Russo-Greek Church.

On the 25th of June, 1791, the island was visited by Capt. Billings, in charge of the Russian "astronomical and geographical exposition for navigating the frozen sea and describing its coasts, islands," etc.

In August, 1815, the place was visited by the Russian exploring expedition in search of the "Northwest passage" on the *Rurik*, Otto von Kotzebue commanding.

In 1827 a Russian exploring expedition, under the command of Capt. Lutke, visited the island.

From the beginning of Russian rule to the present day, it has been the commercial metropolis of the Aleutian Islands and Bering Sea.

But after all this stirring history of a century and a half, it is rather disappointing to learn that up to twenty years ago, when the Americans took possession, it was still a small village of barabaras or dirt huts, partly under ground, the Russian conquerors having largely adopted native ways of living. Since then the village has been greatly improved and almost rebuilt at the expense of the Alaska Commercial Company. They have erected 18 small, but comfortable frame cottages for their employés, together with residences for officers, store, wharf, and warehouses. The village has a population of from 14 to 20 white men, two white women, and about 400 Aleuts and Creoles. The Greek Church has a church and parsonage and school-house.

Upon landing, I was met by Prof. John A. Tuck, who, with his estimable wife, is in charge of the Government school. The three days that the steamer remained at Unalaska were given to the work of the school.

The first year of their work has been unexpectedly successful, and I felt, with the teachers, that the time had come for the commencement of the "Home," which the Methodist Woman's Home Missionary Society of the United States have had under advisement for two or three years, and for which, under the leadership of Mrs. L. H. Daggett, of Boston, they have been raising funds.

During my stay I had the satisfaction of seeing the "Home" commenced by Professor and Mrs. Tuck taking into their family two orphan girls from the island of Attu. A suitable building for the "Home" will be erected by the Methodist ladies this coming spring.

On Sabbath morning I attended the Greek Church and saw the services in connection with the baptism of children. Fourteen infants were presented before the altar of the church. The priest had in his hand a silver spoon with a handle about a foot long, and a bowl about the size of that of a spoon for a salt-cellar. With this spoon the priest dipped water from a silver cup into the mouth of the babe, the attendant priest holding a napkin under the child's chin. After receiving the water, the cup was pressed to the lips of the babe. The mother or godmother then carried it to a side table, where it received a small piece of bread, and if old enough, a drink of water to wash down the bread. From the bread table, the child was carried to the altar platform, and its lips pressed to a picture of the Virgin and Child. The babe was then kissed by its god-mother. These babes were dressed in long white dresses, with a blue or red silk ribbon or sash around the waist.

On the morning of the 17th of June the *Bear* sailed for Bogoslof Island.

Four or five miles west of Unalaska Island is that of Umnak. From its northern side, stretching out for miles into Bering Sea, is a reef. At the time of

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Capt. Cook's visit in 1778, the northern end of this reef was marked by a rock 875 feet high rising from the sea in the form of a tower. This he named "Ship Rock."

On the 18th of May, 1796, during a violent storm, from the northwest, the inhabitants of Unalaska and Umnak Islands were startled by distant explosions and rumbling shocks of an earthquake. On the morning of the third day, when the sky had cleared, it was found that an island 1¾ miles long, and three-fourths of a mile wide, in the form of a cone 2,240 feet high, had been thrown up out of the sea 1,200 feet distant from Ship Rock. Eight years afterwards, some hunters visiting the spot found the adjacent sea still warm and the rocks too hot for landing.

The island continued to grow in circumference and height until 1823. Since then it has gradually decreased in height until in 1884 it measured but 324 feet.

In 1882 the natives reported Bogoslof as again smoking. On the 27th of September, 1883, Capt. Anderson, of the schooner *Mathew Turner*, sailed partly around the island. He reported that a new island had appeared one-half of a mile in circumference, and was throwing out great masses of rock and smoke and steam.

On the 20th of October, 1883, a shower of volcanic ashes fell at Unalaska, and was supposed to come from this island. The first landing and official investigation was made on the 21st of May, 1884, by Capt. M. A. Healy, commanding United States Revenue Steamer *Corwin*.

The new cone proved to be about 1,760 feet from the old one, the two being connected by a low sandspit 326 feet wide, with Ship Rock on the spit between the two cones. The extreme length of the island was found to be 7,904 feet, its general trend SE. by E. and NW. by W.

From the 17th to the 22d of last February the sky was obscured with a cloud of ashes, a liberal shower of which fell in the village of Unalaska, 50 miles away. A pillar of flame and smoke ascended high into the heavens. It has been variously estimated from 4 to 15 miles high.

The first white man to pass by was Capt. Everett E. Smith, of the steam whaling bark *Balæna*, who reported the appearance of four new islands in the vicinity.

It was therefore with feelings of more than ordinary interest that in the early morning of Tuesday, June 17, we steamed from Unalaska, bound for Bogoslof. Long before we reached the island, great white clouds of steam were seen upon the horizon. As we approached nearer all eyes were eagerly bent and glasses trained upon the land looming above the horizon. But the captain was puzzled. He could not make out his landmarks. The two volcanic cones were all right, but where was Ship Rock? Soon we were among myriads of birds which had chosen these inaccessible and warm rocks for their breeding ground.

Capt. Healy with his glass went to the masthead. Two men were placed in the chains to throw the lead. We steamed on and on until it seemed as if we would steam into the volcano itself; sulphurous smoke enveloped us, almost strangled us. Amid the roar of the breakers and the screaming of the birds the leadman called out, "No bottom at 17." Where previously the captain had anchored in 8 fathoms of water, no bottom was now found at 100 fathoms. Apparently the bottom of the sea had fallen out, carrying with it the four islands reported only a few weeks before by Capt. Smith. We steamed in safety over their former sites. More than that, the center of the island had dropped out, and where for centuries Ship Rock had stood, a well-known mark to the mariner, was now a lake.

It was with peculiar sensations that we steamed partly around the island, so close that we could look into the sulphur-lined steam vents, and, enveloped in its steam, could almost imagine that we saw "fire and brimstone."

The captain had intended making a landing and an investigation of the phenomena, but failing to find an anchorage, and the wind having freshened so that it was unsafe landing through the breakers, he reluctantly turned away and steamed for the Seal Islands.

For years the careful observers of the movements of the seal among the early hunters on the Aleutian Islands had noticed that they went north in spring and returned in the fall, accompanied by their young, and a tradition existed among the natives that an Aleut had once been cast away upon islands to the north, which they called Amik. When in 1781 the usual catch of furs began to decrease upon the Aleutian Islands, efforts were made to discover this supposed island. In 1786 the search was joined by Master Gerassim Gavrilovich Pribylof, in the vessel *St. George*. But so well has nature hidden these islands, the favorite home of the fur seal, among the fogs of Bering Sea, that Pribylof cruised three weeks in their vicinity, with every evidence of being in the neighbor-

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hood of land, and yet unable to discover it. But at length the fog lifted, and early in June land was sighted, which he called St. George. A party of hunters were left on the island for the winter and they in turn discovered the larger island of St. Paul.

Over 500,000 skins were taken during the year, and the islands early began to be the "bank" from which Baranof raised the funds to carry on his government in Alaska. If he needed a ship's load of provisions and supplies for his colonies, all he had to do was to kill more seal and pay in seal skins. So great was the slaughter that the Government was compelled to interfere and in 1805 prohibited their killing for a period of five years. From 1820 to 1867, the year of the transfer, 42,000 skins were annually exported to England, the United States, and Canada.

The first years after the transfer of Alaska to the United States again witnessed an indiscriminate slaughter by different firms, until Congress was compelled to interfere and authorize the Treasury Department to lease the islands under suitable restrictions to a responsible company.

This was the origin of the Alaska Commercial Company of San Francisco, which has held the lease for the past twenty years, paying the Government annually a rental of $55,000, and a royalty of $2.62½ on each of the 100,000 skins allowed to be taken. This produced a revenue of $317,500 per year. Last spring the islands were relet for another twenty years to the North American Commercial Company of San Francisco. By the terms of the new lease the Government will be the recipient of about $1,000,000 per year.

At 9:30 p. m. on June 18, the captain dropped anchor in Southwest Harbor, St. George Island. Being unable to land through the breakers, the next day the ship sailed around the southern end of the island and anchored at noon in Garden Cove. The chart said that there was a trail to the village, 2 or 3 miles distant. At the village they called it 4 miles; the young officers that walked it came to the conclusion that it was nearer 14 miles.

At 9:15 p. m. the anchor was weighed and we steamed northward for St. Paul Island.

Going on deck about 6 o'clock on the morning of June 20, the ship was abreast of St. Paul Island, in full sight of the village. Behind us was Otter Island with its bluff shore, and still further behind in the hazy distance the Island of St. George. To our right was Walrus Island, and to our left St. Paul, with its gentle slopes of green grass and moss, its bleak rocks and sand beaches covered in the season with the fur seal. To the right of the village were seen men driving a herd of seal to the killing grounds. Upon a hill near the village floated the stars and stripes, together with the flag of the North American Commercial Company, the lessees of the island. The stars and stripes also floated over the building occupied by Mr. Charles J. Goff, the United States Treasury agent.

From the bay the village presents a more pleasing and inviting appearance than any other in Alaska. The large houses occupied by the North American Commercial Company for their own use, the house of the Treasury agent, the Greek church and the priest's residence, the schoolhouse and the neat white cottages of the people, with their orderly arrangement by streets, ranged as they are on the gentle slope of a hill, make an attractive picture. Before we rose from an early breakfast, Messrs. Goff, Tingle, Redpath, and Elliott were announced. They had come to get their mail, which Capt. Healy had brought up for them. After breakfast I went ashore with Mr. Goff, who with his assistant, Mr. Nettleton, of Minneapolis, also Mr. H. W. Elliott, of Washington, and Mr. Tingle, the company's agent, did all in their power to make the day pleasant and profitable to me.

Soon after landing Mr. Goff announced that a killing had commenced, and we walked over to the grounds to witness the process. A band of 200 or 300 seals were huddled together in the care of keepers. From this band 15 to 20 seals would be taken at a time, and driven a few yards from the main band. Four or five men with long clubs then took charge of the small band, and selecting those of suitable size and age, killed them by one blow on the head. The men with clubs were followed by others with knives, who stabbed the seals to let out the blood. They were followed by the skin men, who took off the skin with the layer of fat adhering to it. These in turn were followed by those who separated the fat from the skin. The skins were then carried to the salting house, where they were carefully counted and salted down. While this was going on, a score of women and girls were filling skin bags with masses of fat, which were carried on their backs to their homes, and then fried out into oil (butter) for winter use. The flesh was also carried home, cut into thin strips, and hung on poles to dry.

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After being dried, it is stuffed into the stomachs of the sea lion, which have been cleaned and prepared for the purpose. After filling it with the dried meat, seal oil is poured in, filling up all the vacant spaces. You then have a huge sausage between two and three feet in diameter. This is stowed away for winter use.

In passing through the village we saw women at work cleaning the intestines of the sea lion, very much as eastern farm-wives prepare intestines for sausages. After being cleansed they are hung out to dry; when dry they are slit lengthwise and form a band 3 or 4 inches wide and from 75 to 100 feet long. From these strips are made the famous kamileka, or waterproof coats worn by these people. These coats are much lighter, stronger, and dryer, resisting rain longer and better than the rubber goods of commerce. Among the Eskimo of the Arctic the larger intestines of the walrus are used, making a correspondingly wider band.

The Greek church at this place is the best painted and neatest kept of any that I have seen in the Territory. The silver candlesticks and other ornaments when not in use were kept from the dust by bag coverings. The church is rich, being supported by a certain percentage of the wages of the whole population. In the adjoining graveyard a large Greek cross made from 2-inch plank stood at the head of each grave. With but two or three exceptions, these contained no name or date, nothing to indicate who was buried there. A gentleman who has attended many of their funerals says he never saw any, even the nearest relative of the deceased, shed a tear or give any outward sign of grief. They say it is good to die. After the burial all the friends are invited to the former residence of the deceased to tea.

With Mr. Goff I also visited the company's schoolhouse. It is well built, commodious, and well furnished in its appointments. Owing to the opposition of the Greek Church, which does not wish the children to learn English, but little progress has apparently been made. The school has been in operation for twenty years, and yet I could not find a child who could converse in the English language, although I was informed that some of them understood what I said to them. I greatly regret that it was vacation time and that I could not see the school in session.

Mr. H. W. Elliott, who is here under appointment from the Secretary of the Treasury to report on the present condition of seal life, pointed out to me the location of the leading seal rookeries, and lamented the seeming fact that the seal were greatly decreasing in numbers. At dinner we were all the guests of Mr. Tingle; the principal fresh meat being roasted seal. I found it very palatable.

The population of the island consists of 5 whites and 217 natives. There are 23 boys and 41 girls between the ages of 5 and 17.

About 4:30, the tide favoring, we returned to the ship after a very enjoyable day on shore. At 5 p. m. the steamer got under way. We rounded the southern end of the island and fetched our course for Asia.

SIBERIA.

Siberia, the battle-ground of conquering Cossack and free-booting Promyshlenki in their century's march across Asia, is, in its northern and northwestern section, a dreary waste of low-rolling and frozen tundra or rugged, snow-covered and storm-swept mountains, the land of the fierce howling poorga, of wild beasts and scattered tribes of brave, hardy, and half-civilized people.

Its bleak, ice-skirted, snow-covered shore north of Kamchatka was our next landing place. Off this coast on the 5th of May, 1885, the whaling bark *Napoleon* was caught and crushed in the ice. The disaster came so suddenly that the crew had barely time to spring into the boats without provisions or extra clothing. There were four boats with nine in each. Four days after the wreck two of the boats were seen by the bark *Fleetwing*, and their crews rescued, five of them dying from the effects of the exposure. The remaining eighteen men after seven days' tossing about in the sea, took refuge upon a large field of ice, where they remained twenty-six days. During this time one-half of their number died from exhaustion and starvation. While on the ice all they had to eat were two small seals, which were caught. One of the men, Mr. J. B. Vincent, being unable to eat the raw seal, had not a mouthful of nourishment for eleven days.

On the 7th of June the nine survivors again took to the boat, and in three days effected a landing on the Siberian coast, to the southwest of Cape Navarin. The day after they landed, five of the remaining died, being so badly frozen that their limbs dropped off. Rogers, the mate, Lawrence, a boat steerer, and Wal-

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ters, the cooper, were also badly frozen and helpless. These were cared for by the natives, who, though in a half-starving condition themselves, divided their living with them. The three men lived through the winter, subsisting on dried fish until March, when Lawrence died, followed the next day by Rogers, and shortly afterwards by Wallace, leaving Vincent the sole survivor of the party. Vincent, being in better physical condition than the others, was adopted by a family having a herd of domesticated reindeer, and therefore had more to eat. With them he remained for over two years until found and rescued July 15, 1887, by Capt. M. A. Healy, commanding the United States revenue marine steamer *Bear*.

While among the deer men, Mr. Vincent carved on a board with a knife the following message, and asked his new made friends on the coast to give it to the first ship they saw. On one side was "1887 J. B. V. Bk. Nap. Tobacco give." On the reverse side was "S. W. C. Nav., 10 M. Help Come." This piece of wood ultimately reached Capt. Healy and told the story, "1887, J. B. Vincent of the bark *Napoleon*, is 10 miles southwest of Cape Navarin. Come to his rescue. Give the bearer some tobacco for his trouble."

Capt. Healy was at Port Clarence when he received the message. With his usual promptness, he steamed over to the coast of Siberia, and after some difficulty in the fog, finally found and rescued the wrecked sailor.

During the following winter Congress made an appropriation for the purchase of presents with which to reward the natives for their care of Mr. Vincent and his comrades. Capt. Healy was delegated to distribute these presents, and for that purpose we were en route to Siberia.

Monday, June 23, opened very foggy, but about 8 o'clock the fog lifted, and Cape Navarin and the coast of Siberia were in full view. A more desolate and dreary scene it is hard to conceive of. A range of mountains with an elevation of about 2,000 feet lined the coast. Cape Navarin itself ended in a precipice 2,512 feet in height, the base of which descended into the sea. Although it was so late in June, the whole country was still covered with snow, except bare spots here and there. Sleds drawn by dogs and reindeer were still in common use. Even while approaching the coast, snow storms were seen sweeping through the cañons of the mountains. The temperature on deck at noon was 45°. A sharp lookout was kept for the native village which was located upon the map, but which was not found upon the coast. At length two tents were seen on the beach, and abreast of them we anchored at 2 p. m. The Captain and Mrs. Healy, Lieut. Dimmock, and myself went ashore. The captain at once sent messengers in every direction on dog-sleds to gather the people together. The main distribution of presents took place on the afternoon of the 24th, and consisted of 1,000 yards of drilling, 500 yards of calico, 100 packages of glovers' needles, 8 dozen hand looking-glasses, 1,500 pounds of ship bread, 2 half-barrels of sugar, 2 barrels of molasses, 1 chest of tea, 6 dozen combs, 5 dozen packages of linen thread, 4 dozen tin pails and pans, 1 dozen iron pots, 2 kegs of nails with hammers, files, gimlets, saws, braces, and other carpenter tools, 1 dozen rifles and one-half dozen shotguns, 125 pounds of powder, 300 pounds lead, 2 bags of shot and 20,000 caps, 1,000 cartridges, axes, hatchets, and butcher knives, 2 dozen fox-traps, 4 dozen pipes, tobacco, snuff, 1 box goggles, one package fish-hooks and lines, beads, and 1 box children's toys. Total value, $1,000.

There are three tribes or families of natives on the Bering Sea coast of Siberia: the Kamtchatkans, occupying the peninsula of the same name, the Tchuctchees, occupying the general region west of Bering Straits and the Gulf of Anadir, and the Koriaks, occupying the country between the former two. Our visit was to the Koriaks, although I afterwards met the Tchuctchees at East Cape. The Koriaks can be divided into three classes: the civilized ones that have come more or less under the influence of the Russian settlements in the interior, the coast men, who mainly subsist on the whale, walrus, and seal, and the deer men, who live off their herds of domesticated reindeer. The latter two classes are more or less nomadic and pagan. They are said to offer sacrifices of dogs.

We met the deer and coast Koriaks. They are a good sized, robust, athletic, and fleshy people, with prominent cheek bones, broad noses, black eyes, and a pleasant, good-natured expression. The men shave the crown of their heads, leaving a fringe of coarse, black hair round the forehead and sides, giving them the appearance of so many monks. They are said to do this that the flying of the hair in the wind may not frighten the wild reindeer when hunting.

The women wear their hair parted in the middle, the two braids hanging down the back. Some braid strings of beads around their necks or pendant from their ears.

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The women are very generally tattooed down the center of the forehead and along each side of the nose to the nostril, and elaborate designs cover the cheek. I also saw tattooing on the hands, wrists, and arms. One girl had two waving lines from the forehead to the nostrils, and nine in a fan shape from the lower lip to the chin. Another, with the other marks, had an "X" on the chin at each corner of her mouth. Occasionally the men were tattooed. I saw a husband and wife marked exactly alike. They were dressed exclusively in skins and furs. Neither on their persons nor in the construction of their tents, furnishings, or bedding did I see as much as a thread of wool or cotton. Their clothing, tents, and bedding are made from reindeer skins. Their food is largely dried reindeer meat, supplemented with whale and seal blubber. Their thread is reindeer sinew, and from the reindeer horns are made many household implements.

The dress of both men and women is made of a large skin shirt, so constructed that the fur can be worn outside or next to the skin, as may be desired, and a pair of skin pants with the fur inside. These extend to the knee. Those of the women are wide, so that when tied at the knee, they present a baggy appearance similar to Turkish trousers. Then a pair of fur boots soled with seal or walrus hide. The tops of the boots are tied closely around the bottom of the pants. Suspended by a string around the neck is a fur hood, which can be pulled over the head when needed. The babe is carried inside the parka, or fur coat, on the back of the mother. A belt around the waist of the parka keeps the babe from slipping down too far. The dress of the babe consists of a single garment of reindeer skin, but this garment combines hood, coat, pants, shoes, and mittens all in one. When dressed, only a small portion of the face of the child is visible.

The sleds are made of birch runners. Over these are a half-dozen arches made of reindeer horns. These arches connect the runners and support the floor of the sled. At the rear end of the sled is a slight railing to support the back of the traveler. No iron is used in making the sled; all the parts are firmly lashed together with whalebone strips or rawhide. The runners are shod with bone. Before these are harnessed six dogs in pairs, or two reindeer. The reindeer are also driven side by side. The harness of the reindeer is very simple, being a strap around his neck connected with a trace between his legs.

The tents we saw are conical, like those of the Dakota Indians, the poles being covered with reindeer skins or walrus hides. In some portions of the country, where straight poles can not be had, whalebones are used for frames, and the tents are oval in shape. Within the tents for the sake of greater warmth are small inner inclosures made by hanging reindeer-skin curtains. These small inclosures are the sleeping places. As they follow their herds from one pasturage to another these tents are easily taken down, loaded on the sled, removed to the next camp and set up again.

They have two kinds of boats, consisting of a light frame of birchwoood, over which is stretched seal or walrus skin. The large, open boat is called by the natives oomiak, by the Kamtchatkans bidar. These will carry from 25 to 50 people. The smaller boat is intended for from 1 to 3 men, and is entirely encased in skin, except the openings left for the men to sit in. These are called kyaks, kaiak, or bidarka.

In hunting whales, walrus, and seals they use spears with ivory points set in bone sockets. Small birds and animals are trapped. Their gun is a miniature rifle with a barrel not over 2 feet long. To the stock are fastened by a hinge two light sticks, which are used as supports to the gun when firing. Powder and lead are so difficult to obtain and so expensive that the hunter runs no unnecessary risk in using it. It is said that sometimes they hunt to recover the bullet in order to use it again. I tried in vain to purchase one of these guns. They seem to have no chiefs, their organization being largely patriarchal. If one man accumulates more deer than his neighbors, he secures a certain amount of influence on account of his wealth. Poor men, who have no deer of their own, join his band, and assist in caring for his herd, in return for food and clothing. The only law that governs the community seems to be the natural law that is found in all barbarous tribes, that of retaliation. A few years ago a feud started between a band living on the coast, and a band of deer men living in the neighborhood, during which the latter band was exterminated.

They impressed me as a very unselfish people. In the distribution of the presents none seemed to think that someone else was receiving more than he. The more frequent expression of anxiety seemed to be that no one should be overlooked. They also called attention to some who were unavoidably absent, and offered to take them their share. Evidently some of them had never been

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upon a ship before, and they were naturally curious to look all over it. Sometimes when a family came off in their boat, at first only the men came aboard. After a while, as if gaining confidence, the women and children would venture. Frequently as soon as they were on deck they would sit down as if afraid to stand up. One woman reaching the deck in safety expressed her joy by throwing her arms around her husband's neck and they rubbed noses (their method of salutation in the place of kissing).

I secured from them for the museum of the Society of Natural History and Ethnography at Sitka, a number of things to illustrate their manner of living.

There being a herd of some 1,500 reindeer a few miles up the coast, in order that we might visit them and the ship procure some fresh meat, after the distribution of the presents the captain got under way and sailed up to the reindeer herd, where he again anchored. Going ashore, we found the herd on the beach, some of them apparently drinking the salt water. The winter with its unusual amount of snow had been severe upon them, so that they were very poor. They were also shedding their hair and their horns were in the velvet, so they did not make a very impressive appearance. Off to one side two sleds were standing with two deer attached to each. Getting upon one of the sleds, by motions I made them understand that I wanted a ride, and a short one was given me. The reindeer were much smaller than I had expected to find them, the majority of them being not much larger than the wild deer of other sections. The captain purchased four deer, which were slaughtered and dressed for him. When getting ready to lasso the deer the owner's family seated themselves in a circle on the ground, where probably some rites connected with their superstitions were observed. Upon attempting to approach the circle we were motioned away. After a little while the men went out and lassoed a selected animal, which was led out on one side of the herd. The man that was leading it stationed himself directly in front of the animal and held him firmly by the two horns. Another with a butcher knife stood at the side of the deer. An old man, probably the owner, went off to the eastward, and placing his back to the setting sun seemed engaged in prayer, upon the conclusion of which he turned around and faced the deer. This was the signal for knifing the animal. With apparently no effort, the knife was pushed to the heart and withdrawn. The animal seemed to suffer no pain, and in a few seconds sank to his knees and rolled over on his side. While this was taking place the old man before mentioned stood erect, motionless, with his hand over his eyes. When the deer was dead he approached, and taking a handful of hair and blood from the wound, impressively threw it to the eastward. This was repeated a second time. Upon the killing of the second animal the wife of the owner cast the hair and blood to the eastward. I did not remain to the slaughter of the other two. While the animal was bleeding to death several women and girls gathered around and commenced sharpening their knives on stones preparatory to skinning the animal, which they proceeded to do as soon as the deer were dead. Engineer Meyers photographed the herd.

At 4:15 on the morning of the 25th the ship was gotten under way and we started northward. After proceeding about 20 miles we ran into a large field of floating ice. The sun was shining brightly. Off upon the western horizon, clear-cut against the sky, glistening and sparkling in their covering of snow, were the Siberian mountains, while all around us, as far as the eye could reach, were great masses of heavy ice, rubbing and grinding against one another. We were six hours steaming through this ice. While in the ice the captain shot three, and secured two, hooded seal. Great numbers of waterfowl were in the open spaces among the ice.

It was here that the whaling bark *Sappho* was crushed and sunk in 1882, and the barks *Rainbow* and *Napoleon* in 1885, and the bark *Ladoga* in 1889. This last vessel escaped destruction and was repaired. Just to the northward, between us and our destination, St. Lawrence Island, in 1885 the bark *Gazelle* was crushed and sunk.

On Saturday afternoon, June 28, we sighted the snow-covered coast of St. Lawrence Island, and dropped anchor off the village Chib-u-chak on the northwest corner of the island. We are now in latitude 64 degrees north. The sun rises at 1:55 o'clock and sets at 10:05 p. m. Temperature at noon 40 degrees. This is the largest island in Bering Sea. It was discovered and named by Bering's expedition in the summer of 1728. In 1775 the island was sighted by Captain Cook and named Clark Island. On the 10th of July, 1817, it was visited by Kotzebuej's expedition in the *Rurik*, and in 1830 by Etolin in command of the brig *Chicagof*. Etolin found five native villages on the island. In 1878 the island was the scene of a great tragedy. Starvation and pestilence carried away over 400 of the people.

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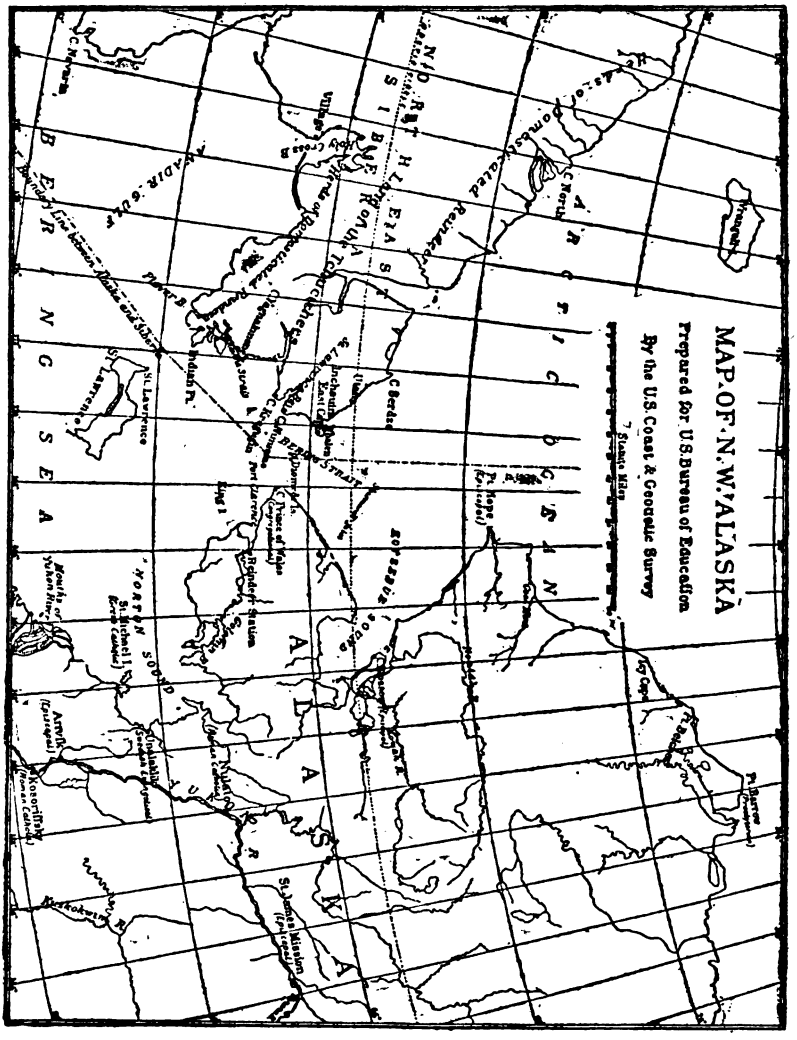
When the revenue cutter visited the island in 1880 not a man, woman, or child was left to tell the tale. In four villages the corpses of the population alone were found. All the villages on the island with the single exception of Chib-u-chak had been swept out of existence.

In 1884 Capt. Healy reports, "At the villages along the north shore no sign of living beings could be found, but the still decaying bodies of the unfortunate Eskimos were lying in and about the falling houses."

Before we dropped anchor four or five umniaks, loaded with natives, were waiting to board us. As soon as the anchor went down they paddled up to the



gangway, and from sixty to seventy men, women, and children came aboard, prepared to barter walrus tusks, ivory carvings, fur clothing, native boots and shoes, seal skin, etc. The women were more highly tattooed than any we have before met. As the captain wished to take the census of the village he had to go across to Indian Point (Cape Tchapalin), Siberia, for an interpreter.

It was a five-hours run. We reached Indian Point about 6 o'clock in the morning. The natives were soon off in force with the usual things for barter, and a few to secure the services of the ship's physician. The village consisted of some 2 dozen skin tents, also a few underground huts and one small frame house. Above the tide on the beach along the whole front of the village lay

the unbroken ice and snow. The village itself is on a low sandspit that projects out into the sea. The mountains back and above the village were covered with snow, and even while we were anchored there, a driving snow storm was sweeping over them. Small cakes of floating ice were drifting around the vessel.

Going ashore, I was greatly impressed with the number of the children. In all the journey I have not met so large a number. Being in Russia, our Alaskan school system can not reach them. They are an Eskimo colony, speaking the same language as the natives of St. Lawrence Island. Perhaps they could be induced to remove over there for the sake of schooling their children.

At Indian Point we had eider ducks for dinner, and found them good eating. Securing an interpreter, Tommy Tough by name, the captain, on the morning of June 30, returned to St. Lawrence Island. On our way across, although an allowance of 5 miles had been made for the current, the vessel was carried 10 miles farther out of its course, making a drift of 15 miles in a distance of 40. A dense fog having set in, the ship passed north of the island without seeing it. The fog lifting at 10:30 a. m., we retraced our course and soon after dropped anchor abreast of the village, and I went ashore with Lieut. Dimock, Dr. Holmes, and the interpreter.

The houses are from 20 to 40 feet in size. For a distance of 5 or 6 feet above the ground the walls are built of driftwood, whalebone, or timbers and planks from shipwrecked vessels. These are placed on end side by side, forming an inclosure in a circular or oblong form. The cracks between these planks are stuffed with moss. From the top of these walls rafters made of poles are extended across, meeting in the center. These are supported in the center by a ridge pole resting upon posts. These rafters are covered with walrus and seal skins, forming the roof. Some roofs are in the shape of a cone and others of a dome. Inside they are partitioned off around the sides with deer skin curtains. The spaces curtained off form the sleeping places. All around, inside and outside, are filth, dirt, sleds, spears, snowshoes, and household utensils. The houses and tents are located with no reference to order or street lines. The sleds are shod with bone. On a few small ones, the whole runner was made of a walrus tusk.

If the building is a very large one there is a row of supporting poles on each side, midway between the center and sides. Over the rafter poles are stretched walrus hides. These are held in position by rawhide ropes, attached to which and hanging down the sides of the building are the vertebræ of whales, large stones, and old iron from shipwrecked vessels. This anchorage both stretches the skins and prevents them from being blown off. These skins being translucent let in a great deal of light. There are no windows in the house, and but a small opening, from 2 to 2½ feet above the ground, for a door. Fire, when they have any, is made on the dirt floor in the center of the room. Each building is occupied by several families. Near the house is a scaffold made of posts of the jaw bones of the whale. These are 7 to 10 feet high and 10 feet wide. A series of these make the scaffolds from 20 to 30 feet long. On these are placed the skin boats, harness of the dogs, meat, etc., so as to be out of the reach of dogs. Upon one of these, attached to the whale bone cross beam, was a child's swing made of walrus thong rope.

I saw several excavations where underground houses had once been, and one such house still standing with the roof partially fallen in. The sides were composed of walrus skulls laid up like a New England stone wall. In this house were some corpses, together with the spear and arrowheads and personal belongings of the dead.

Large patches of snow and ice still remain in the village, some of them being from 3 to 4 feet deep. As we passed from house to house we were followed by a crowd of dirty, but bright-looking children. From the eldest to the child which was just able to talk, they asked for tobacco, which is used by both sexes and all ages down to the nursing child. Five little girls, from 4 to 10 years of age, gave me a native dance. They commenced with a swinging motion of the body from side to side, throwing their weight alternately upon each foot. This was accompanied by an explosive grunt, or squeak, as if the air was being violently expelled from the lungs. As they warmed up, they whirled around, writhed and twisted their bodies and distorted their faces into all manner of shapes and expressions, until they would fall down with dizziness.

The census revealed a total population of 270, of whom 70 were boys and 55 girls, living in 21 houses. This is a good village for a school. One established here ought to draw to it some families from Indian Point, Siberia. They are the same people, and the two villages are about 40 miles apart. During the summer of 1891 the Reformed Episcopal Missionary Society will establish a mission school at this village.

KING ISLAND.

Returning the interpreter to Indian Point, the captain steamed away for King Island, which we reached about 5 p. m. on July 1. This is one of the most remarkable settlements in America. The island is a great mass of basalt rock, about a mile in length, rising from the sea with perpendicular sides from 700 to 1,000 feet above the water. On the south side the wall is broken down by a ravine rising at an angel of 45 degrees, and is filled with loose rock. A great, permanent snow bank filled the bottom of the ravine from the water to the top of the mountain. On the west side of the snow is the village of Ouk-i-vak, which consists of some 40 dwellings or underground houses, partly excavated in the side of the hill, and built up with stone walls. Across the top of these walls are large poles made from the driftwood that is caught floating around the island. Upon these are placed hides and grass, which are in turn covered with dirt. A low tunnel or dirt-covered hallway, 10 to 15 feet long, leads directly under the center of the dwelling. This is so low that we had to stoop and often creep in entering. At the end of the hall directly overhead is a hole about 18 inches in diameter. This is the entrance to the dwelling above.

Frequently in summer, these caves become too damp to live in. The people then erect a summer house upon top of the winter one. The summer house consists of walrus hides, stretched over a wooden frame, making a room from 10 to 15 feet square. These summer houses are guyed to rocks with rawhide ropes, to prevent them from being blown off into the sea. The entrance is an oval hole in the walrus hide, about 2 feet above the floor. Outside of the door is a narrow platform about 2 feet wide, leading back to the side of the hill. Some of these platforms are from 15 to 20 feet above the roofs of the huts below them. Across the ravine from the village, at the base of the perpendicular sides of the island is a cave, into the mouth of which the surf dashes and roars. At the back of the cave is a large bank of perpetual snow. On the side of the mountain above there is a perpendicular shaft from 80 to 100 feet deep, leading down into the cave. This cave is the storehouse for the whole village. Walrus and seal meat is dropped down the shaft, and then stored away in rooms excavated in the snow. As the temperature in the cave never rises above freezing point, meat so stored soon freezes solid and keeps indefinitely. The women gain entrance to their storehouse by letting themselves down the shaft, hand over hand, along a rawhide rope.

Capt. Healy had a census taken with the following result: Total population 200, of whom 33 were males and 45 females under 21 years of age. Here, as at the other native villages, I secured a number of articles of interest for the museum of natural history and ethnology at Sitka.

THE WHALING FLEET.

At 3:15 a. m. on the 2d of July the ship anchored at Port Clarence, in the midst of the Arctic whaling fleet. Eight steamers and eighteen sailing vessels, all flying the American flag, were an inspiring sight in this far off, uninhabited bay; almost within the Arctic Circle; and the more so, as a few months ago, in Washington, I heard a gentleman who had just returned from a trip around the world, say in a public address that in all his trip, he had seen but one vessel flying the Stars and Stripes. Many of the whalers leave San Francisco in January, and it is their custom to gather at this point about the 1st of July before entering the Arctic Ocean, to meet a steamer sent from San Francisco with a fresh supply of provisions, coal, etc.

Soon after anchoring, the captains of the whalers began arriving in order to get their mail, for the captain of the revenue steamer, among other good offices for humanity, brings up the yearly mail for the 2,000 whalers, traders, teachers, and missionaries, and whoever else may be living in the Arctic regions of the United States. For those who have had no tidings from their loved ones at home or returns from an important business transaction, the coming of the revenue steamer is an important event. Great bundles of letters and papers were piled upon the captain's table, and again and again they were carefully scanned, each captain picking out those that belonged to himself or his crew. Some of them did this so nervously, that though they personally looked over the packet three or four different times, they still missed some, which would be detected and handed out by some one following.

A few visiting Eskimos were camped upon the beach, some of them being dressed in bird instead of deer skins.

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The day before we arrived the mate of one of the vessels had died, and an officer on another vessel was very sick, dying a few weeks afterwards. In a fleet with hundreds of sailors are some accidental cuts, bruises, etc., so that there were many calls for the professional services of the Government physician. This is another feature of the beneficent work of the revenue steamer. In Arctic Alaska in summer are 2,000 sailors on the whalers, a hundred traders and thousands of natives, covering an area of tens of thousands of square miles, and no physician except the one carried around on the annual cruise of this vessel. The value of such services can not be estimated.

During our stay at Port Clarence Capt. Healy, in the discharge of his official duty, as usual, sent officers on board of every vessel to search for liquors. The large majority of the captains of the whaling vessels are opposed to the trading of liquors to the natives for furs; but there are some who believe in it, and boldly say that if the cutter did not come and search them they would engage in it, and that they do engage in it on the Siberian coast, where the cutter has no jurisdiction. The result of the search was that 11 barrels of alcohol and 6 cases of gin were seized upon one schooner and emptied into the ocean. One captain, seeing the officer coming, emptied a barrel of liquor over the side of his vessel and threw three gallon cans after it. The cans, instead of sinking, floated by the searching officer. He, doubtless thinking them empty kerosene cans, did not take the trouble to pick them up. During the past ten years hundreds of barrels of vile liquors have been emptied into the sea as the result of the vigilance of Capt. Healy and the officers of the revenue cutter. The amount of crime, suffering, and destitution thus prevented can not be overestimated. The country and all who are interested in saving the natives of this coast from the demoralization of rum owe a large debt of gratitude to Capt. Healy, who has practically broken up the traffic on this northwest coast.

One of the captains reported a case of assault and battery with intent to kill. On the 30th of June his steward had dangerously wounded one of the sailors, cutting with a razor a gash 8½ inches long and to the ribs in depth. The steward had been in irons ever since. It was a small schooner and there was no suitable place for keeping the prisoner, who had threatened to kill the mate and fire the ship when he regained his liberty. Under the circumstances the captain was very anxious to get rid of him, and wrote Capt. Healy, as the nearest Government official, an urgent letter asking him to take the man off his hands. This is another phase of the many-sided work of a Government cutter in this vast land without law or courts. The steward being equally anxious to claim the protection of the Government, he was brought alongside in irons. The irons were taken off and he was assigned work. The commanding officers of all the revenue vessels visiting these outlying portions of the country should be clothed with the powers of a justice of the peace, so that offenses could be investigated, testimony taken, and offenders arrested and bound over for trial at the United States district court at Sitka. As it is, the captain could not legally have taken this man against his will, and when the vessel arrives at San Francisco the man can go ashore a free man, escaping not only all punishment, but even an official investigation.

In the harbor awaiting our arrival was the schooner *Oscar and Hattie*, Capt. J. J. Haviside master, laden with building material and supplies for the schoolhouses at Cape Prince of Wales, Point Hope, and Point Barrow. The schooner got under way that same afternoon for Cape Prince of Wales, about 30 miles distant. Upon the following day the schooner *Jennie* arrived with supplies for the whalers. She had on board the four teachers, Messrs. H. R. Thornton and W. T. Lopp for Cape Prince of Wales, Dr. John B. Drigg for Point Hope, and Mr. L. M. Stevenson for Point Barrow. At midnight we witnessed one of those gorgeous sunsets for which the Pacific coast is so famous.

On the morning of the 4th of July all the vessels "dressed ship" in honor of the day. At 8 o'clock a. m. we got under way, reaching Cape Prince of Wales at 1:25 p. m. The captain very kindly sent Prof. Thornton and myself ashore at once, and we celebrated the 4th of July, 1890, by locating at this extreme western end of the western hemisphere the site and laying the foundations of the first schoolhouse and mission on the Arctic coast of Alaska. From this school is visible to the north, the Arctic Ocean; to the south, Bering Sea, and to the west, Bering Straits, the coast of Siberia, and Diomede Islands. The cape is a bold promontory crowned with groups of needle rocks. As we had a teacher on board, we could trace the resemblance of one group to a teacher and pupils. Back of the coast the mountain peaks rise to the height of 2,596 feet. At the base of the promontory is a low sand spit, upon which is built the native village of King-e-gan. This school is one of the contract schools of the U. S. Bureau of Education and is in charge of the American Missionary Association of the

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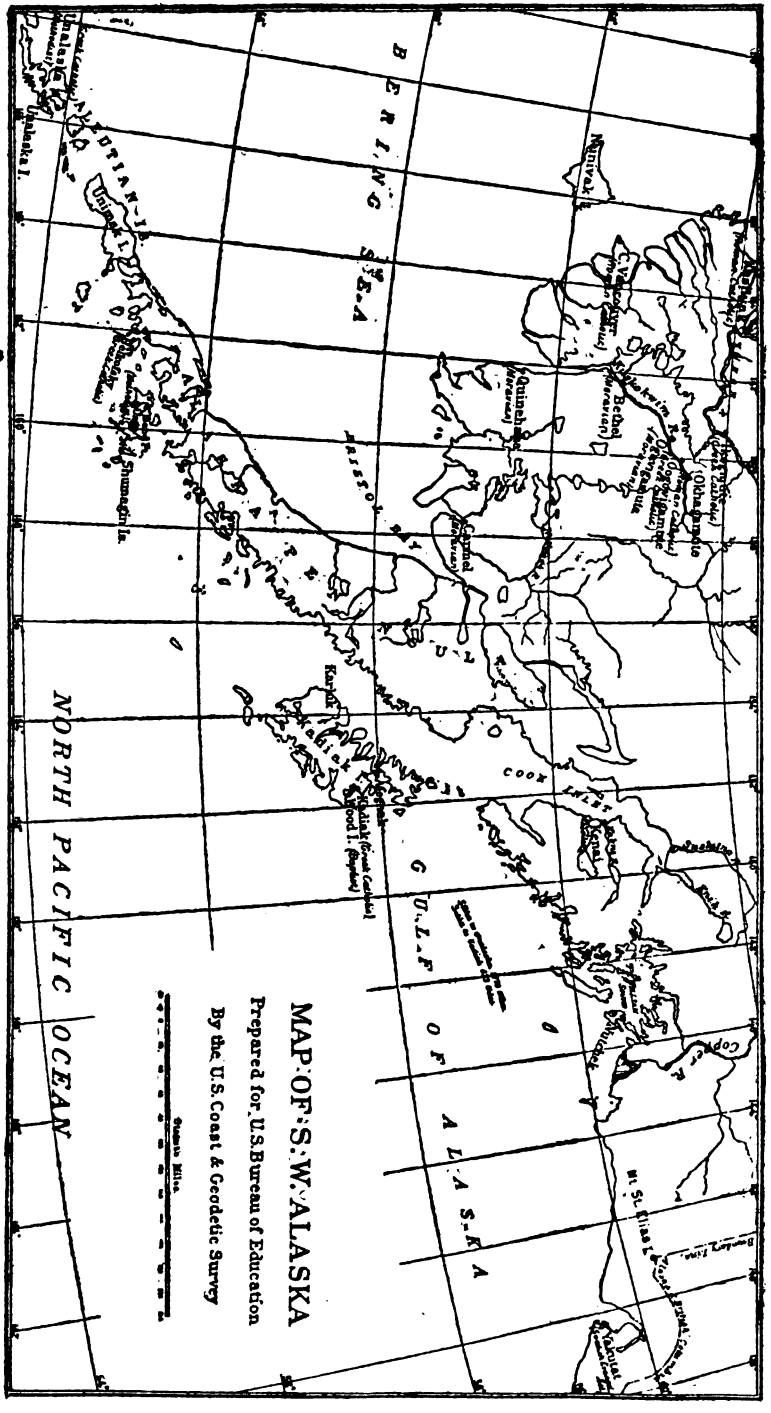

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Congregational Church. The money needed for its establishment was contributed by the Congregational Church of Southport, Conn., Rev. William H. Holman, pastor.

At Port Clarence volunteers were called for and through the courtesy of the several captains the following carpenters offered their services without pay in the erection of the schoolhouses at Cape Prince of Wales and Point Hope: Charles Johnson, of the steam bark *Thrasher;* James Hepburn, of the *Balena;* Edward E. Norton, of the *Orca*, and A. S. Curry, of the *Grampus.* Capt. Healy sent off 2 carpenters and 10 or 12 men from the *Bear.*

While the house was building Capt. Healy took the ship over to (Krusenstern) Little Diomede Island to take the census of Imach-leet. Upon our arrival it was storming so badly that he was compelled to continue on over to the Asiatic side for a safe anchorage. On the third day, the storm having abated, we started for Imach-leet, calling at East Cape on our way. We also passed close to Inug-leet, on Ratmanoff Island, but did not go on shore.

Bering Straits, which separate the American and Asiatic continents, are 40 miles broad. These straits were first passed by Capt. Bering in August, 1728, who demonstrated the fact that Asia was separated from America. It remained for Capt. Cook, in August, 1778, to complete Bering's discoveries and give to the world the exact relations of the continents to each other. Nearly in the center are Big and Little Diomede (Ratmanoff and Krusenstern) islands. The former belongs to Russia, and the latter to the United States. As these islands are only 2 miles apart, Russia and the United States are here close together.

Imach-leet, like Inug-leet and Ouk-i-vak, is built upon the steep side of a mountain, and is the filthiest place yet visited. Being so close to the Asiatic settlements, it is the gateway of much of the liquor smuggled into this section of Alaska. A school with an efficient teacher at this place would prevent much of this illicit traffic and accomplish a great work.

As we returned to King-e-gan we sailed close to Fairway Rock, the Indian name of which is Oo-ghe-e-ak, and is said to signify, "Thanks to God," because there is room to shelter two native boats which may be overtaken in this part of the sea by a storm. Fairway Rock is a quarter of a mile in circumference and from 300 to 400 feet high. It is one of the natural danger-signal stations of Bering Sea and the Arctic, being occupied by myriads of birds, which, by their continual cries in thick and foggy weather, warn the navigator of his proximity to the rock.

At King-e-gan the captain picked up his carpenters and sailors, who had finished the school building, and on the afternoon of July 12 we started northward through Bering Straits into the Arctic Ocean. Twenty-four hours later we crossed the Arctic Circle and were in "the land of the midnight sun."

July 13 Capt. Healy anchored off Schishmareff Inlet to take the census. At the time of Capt. Beechey's expedition in 1826 there was a large native village here. Now it is reduced to a very small number.

In visiting the camp upon shore I came across the oldest-looking native that I have seen this season. A number of the natives visited the ship. Wild ducks were so plentiful that the captain bought a couple of dozen for the table at the rate of a cent apiece. The next morning we anchored off Cape Blossom, in Kotzebue Sound. This sound was discovered on the 1st of August, 1816, by Capt. Kotzebue, in command of the *Rurik*, fitted out by Count Romanoff, of Russia, to discover the northwest passage. In September, 1826, it was visited by Capt. Beechey in the British ship *Blossom*, who was coöperating with Sir John Franklin, Franklin working from the eastern side toward the west, and Beechey from the western side eastward. The two expeditions failed to make connection. While in the sound Capt. Beechey buried a cask of flour. In July, 1850, the ships *Herald*, Capt. Hellett, *Plover*, Capt. Moore, and the *Investigator*, sent by the British Admiralty in search of Sir John Franklin, and the schooner yacht *Nancy Dawson*, under her owner, Robert Shedder, visited the sound. The flour buried nearly a quarter of a century before was found in good condition, and a dinner party given, at which were cakes and pies made from it. In Eschscholtz Sound, the southwest arm of Kotzebue Sound, are cliffs from 20 to 80 feet in height, which rise into hills between 400 and 500 feet above the sea.

At the time of Kotzebue's visit this cliff was supposed to be an immense iceberg, covered with a foot of soil and grass, but was found by Capt. Beechey to be frozen earth. The interesting feature of the cliff is that it contains a large deposit of fossil ivory, mammoth tusks, teeth, and bones. I secured portions of two mammoth tusks and two teeth.

One afternoon Lieut. Buhner and myself started to visit some of the native villages. After going about 15 miles we got on the shoals and were compelled

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to return to the ship. While absent we landed and visited some native graves. There is a row of them extending for miles along the beach. As there is a frozen subsoil, rendering it very difficult to dig graves, the dead are wrapped up in seal skins, which are securely tied and then deposited above the ground in the forks of poles or elevated platforms so high above the earth that the wild animals can not reach them.

The whole landscape out from under the snow was covered with beautiful wild flowers, and we were covered with mosquitoes that swarmed around us in clouds. We saw very few natives on the beach, they being largely at Sheshalik, on the north side of Hotham Inlet. When the ice leaves Kotzebue Sound in the summer the beluga, or white whale, comes in, and the natives come down the rivers by hundreds from the interior to hunt him and later on to barter with the coast tribes. About the middle of July the run of the whales is over, and that of the salmon commences on the Cape Blossom side of the inlet. The population then change their tents from the north to the south side of the inlet. In the mean time the Alaskan and Siberian coast natives are arriving day by day, until in August from 1,500 to 2,500 people are gathered on the spit north of Cape Blossom, fishing and trading. This is the great international annual fair and market of Arctic Alaska.

The natives of the interior here barter their beautiful furs with the natives of the coast for seal oil, walrus hides, and seal skins, and with the natives of Siberia for reindeer skins, whisky, and breech-loading firearms, cartridges, etc. Formerly these gatherings were visited by schooners, fitted out at San Francisco and Sandwich Islands, with cargoes of liquor in bottles labeled "Florida Water," "Bay Rum," "Pain Killer," "Jamaica Ginger," etc. This traffic has largely been broken up by the visits of the revenue cutters.

A schooner was at anchor off Cape Blossom when we arrived. Seeing the cutter it weighed anchor and sailed away, but not before an officer had been sent on board to search her. Although no unusual supply of liquor was found on board, yet that afternoon a native and his wife were found drunk from liquor received from this vessel. They were brought aboard the cutter, testified where they secured the liquor, received a reprimand, and upon the promise of not drinking again, were let go.

On the north side of the sound is the entrance to Hotham Inlet into which empty two large rivers, the Kowak and the Noatak. Although the existence of these rivers was known in a vague way by reports from native sources, they were first explored and mapped in 1883, 1884, and 1885 by expeditions fitted out by Capt. Healy, commanding the *Corwin*. As the larger number of natives whom I wished to see had not yet arrived the captain concluded to go on and fulfill his duties farther north and return here before the people should separate, consequently, on the morning of the 16th, with a fair wind, he sailed northward. We were soon abreast of Cape Krusentern, where, in July, 1886, the *John Carver* was crushed in the ice. On the morning of the 17th we dropped anchor off Cape Thompson to water ship. The ship's boats were taken ashore and filled with fresh water from a creek. The boats were then rowed back to the ship and the water pumped from them into the ship's tanks. By noon the tanks were full and we had on board a month's supply of water. In the afternoon the sailors were allowed to go ashore and wash their clothes. Soon after anchoring the natives began to come on board and the deck was covered with them all day.

Cape Thompson is a bold, rocky bluff 1,200 feet high. It is a remarkable cliff geologically, showing a great fold of the earth's crust. The face of the cliff is also a great bird rookery, birds by the thousand and tens of thousands nesting in the cracks and upon the projections of the rocks. Wishing some egg shells a party of natives were hired for a few crackers to get some eggs. Taking a rope with them, they scaled the cliffs, and letting one of their number down the face of the precipice with the rope he soon gathered two bushels and a half of eggs.

Leaving Cape Thompson at 5 o'clock p. m. we reached Point Hope about 11 p. m., and dropped anchor in the midst of twelve vessels, largely belonging to the New Bedford whaling fleet. The captain immediately dispatched a boat for mail to the bark *Thomas Pope* that had come up from San Francisco with supplies to the whalers from New Bedford. In due time the boat returned with a batch of papers as late as June 10, but no letters. It then being nearly midnight I concluded to remain up and see the midnight sun, which dipped about half way into the water and then commenced to rise again. At the setting it was partially obscured by a cloud, but the rising was cloudless and beautiful.

Point Hope is a narrow stretch of land extending out into the Arctic Ocean, some 16 miles from the general line of the coast. This gives it its native name Tig-e-rach (Finger.) It has evidently been formed by two great fields of ice

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grounding on the bottom and pushing the sand in a ridge before them, until the ridge rises above the ocean. Between these parallel ridges is a lake extending nearly the entire length of the peninsula. Formerly the cape extended still farther into the ocean, but one year the ice pack came along with such force as to cut the end off, sweeping away with it a number of underground houses.

For three days we lay at anchor riding out a southern gale. Ten days later (July 28), at the same place, in a similar storm, the *Thomas Pope*, having not yet finished discharging her freight was driven into the breakers and wrecked, and her crew was received on board the revenue cutter by Capt. Healy. On Monday, July 21, the storm having abated, the ship was moved nearer the village and I went ashore to inspect the school building, which was in process of erection by Capt. Haviside and the volunteering carpenters who had preceded us from Cape Prince of Wales, where Capt. Healy had remained to finish up the work on that school building. Capt. Healy sent his carpenter and a number of sailors on shore to assist in the work. By night the building was finished and ready for occupancy. This is the second of our new schools in the Arctic. It is a contract school under the supervision of the Mission Society of the Protestant Episcopal Church. The teacher is John B. Driggs, M. D. The advisability of the establishment of a school at this point was represented to me last fall by Lieut. Commander Charles H. Stockton, U. S. Navy, who had just returned from a cruise on this coast. Bringing the matter to the attention of Hon. W. T. Harris, LL. D., United States Commissioner of Education, and through him to the honorable Secretary of the Interior, I had the privilege of securing the establishment of schools for the Arctic Eskimo at that place.

While at Point Hope I visited the native village, but few of the people being home. I also visited the cemetery; the dead, tied up in deer and walrus skin blankets, are laid on platforms above the reach of dogs and wild beasts. The present population is about 300. But in the year 1800, when this was the leading tribe on the Arctic coast, the village is supposed to have had a population of about 2,000. In that year their power was broken by a great land and sea fight near Cape Seppings, between them and the Nooatoks of the interior. In this disastrous battle their leading hunters being killed, a famine set in which carried away half of the remaining inhabitants. During the day a number of natives came on board. Among them were three from Cape Prince of Wales. Last winter while out on the ice after seals, the ice broke loose from the shore and floated out to sea, carrying them with it. They were on the ice drifting helplessly about in the Arctic Ocean for a month or six weeks, when the floe finally went ashore at Cape Thompson, 150 miles north of where they started from. The party of five were reduced to the greatest straits for food, even eating up their boots. One died on the ice, and a second soon after landing, leaving three to be returned on the cutter to their friends and homes. Last winter two men on the ice hunting were drifted away from this place and have never been heard from.

Four ships have been wrecked here in late years. The *Louisa* and the bark *John Howland* in 1883; the *Thomas Pope* in 1890, and the *Little Ohio* in 1888. In connection with the latter wreck, the officers and 30 men were drowned. Among those that were saved was a sailor, who took a position at the whaling station. Last winter while en route from Cape Lisburne coal mines to Point Hope, he froze his feet so badly that mortification set in. Upon the arrival of the *Bear* he was received on board for medical attendance, and his toes were amputated by the surgeon.

In 1887 a San Francisco firm established a whaling station several miles from the village, the influence of which has been demoralizing. The natives are now recruiting their numbers by purchasing children from the interior tribes, which children, as they grow up, become a part of the tribe. The market price for a child is a seal skin bag of oil, or a suit of old clothes.

Having attended to everything that was necessary at Point Hope, and paid off the natives who assisted in the erection of the schoolhouse, our mail was sent over to the *Thomas Pope*, which was soon to sail for San Francisco, and at 10 o'clock a. m. on the 22d of July we sailed north with a fair wind, passing Cape Lisburne at 1:35 p. m. From Cape Lisburne the coast turns to the eastward at almost a right angle, the general trend being to the northeast until Point Barrow, the most northern limit of the continent, is reached. Cape Lisburne, 849 feet high, is a bold bluff of flint and limestone, abounding with fossil shells and marine animals. It is also in its season a noted rookery for birds. The immediate vicinity is said to be the flower garden of the Arctic (Koog-Moote) on account of the number and variety of the wild flowers. From Cape Lisburne there is a uniform descent and breaking down of the hills for 50 miles

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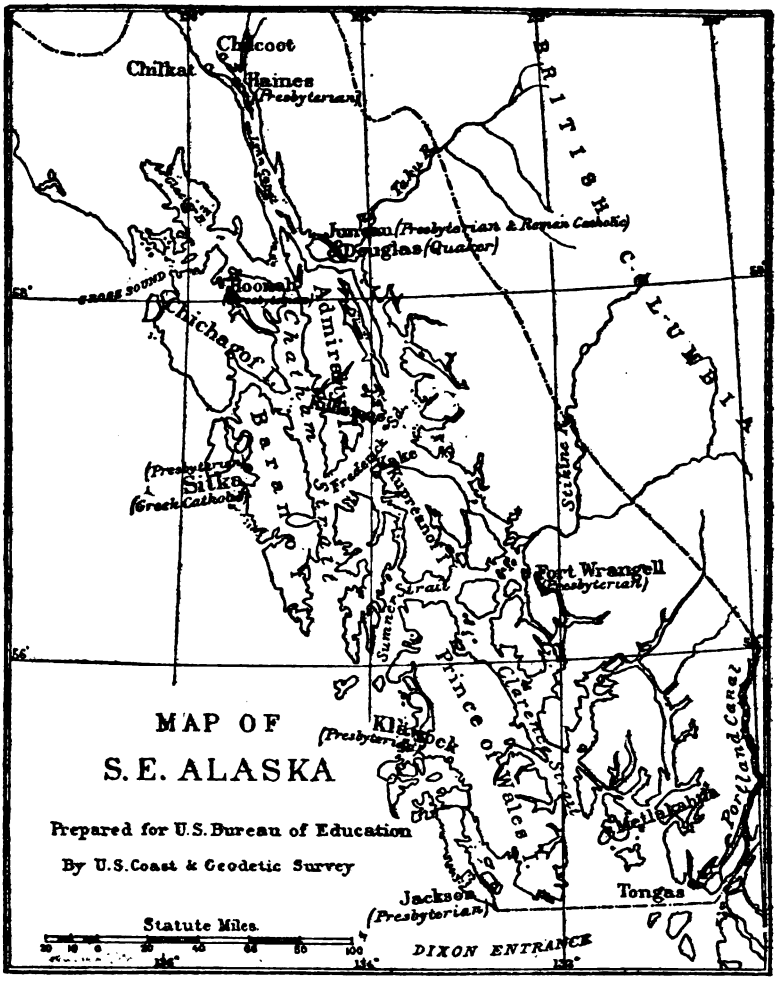
to Cape Beaufort. At Cape Beaufort is the last point where the hills reach the coast. Soon after leaving the cape, the ice has pushed up the sand, forming a shingle or outer coast, running parallel with the real coast. This outer coast is a strip of sand with a varying width of 900 to 1,000 feet, about 6 feet above the level of the sea, and extending 120 miles north. The body of water inclosed between the two coasts is from 2 to 6 miles wide. From Cape Lisburne to Cape Beaufort are extensive coal mines, at which some of the steam whalers replenish their exhausted supplies. This season over 500 tons have been mined by the whalers. At Cape Beaufort the geological formation is sandstone, inclosing petrified wood and rushes, with veins of coal. Drift coal was found on the beach almost



up to Point Barrow. During the night the wind gradually grew stronger until towards morning, when we encountered a heavy southwest gale, causing the ship to roll until it was almost impossible to keep in bed.

At 11 o'clock a. m., on the 24th of July, we were in the midst of floating ice, and at noon anchored off Cape Collie. Soon the musquitoes began to swarm on board, and the captain moved his anchorage farther out to sea.

We were again in the midst of the whaling fleet, and at the edge of the ice pack which prevented farther progress to the north. The Arctic "pack" is the name given to that large body of perpetual solid ice in the Arctic Ocean extending from the coast of Alaska across to Siberia. Its southern limit is constantly

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changing with the severity of the season, and the course of winds and currents. Its southern edge is also irregular, sometimes containing openings or canals extending into the pack for miles, these are called "leads." A wider and shorter opening is called a "pocket."

In August, 1778, Capt. Cook found the southern edge of the pack resting on Icy Cape, 40 miles south of our present anchorage. It was a compact wall of ice, 10 feet above the water and from 70 to 90 feet under the surface, extending west of north and east by south, from continent to continent. In 1826 Capt. Beechey did not meet it until near Cape Smyth, 120 miles farther north. August 20, 1879, the fleet reached the pack at Blossom Shoals, off Icy Cape. August 10, 1885, the pack was at our present anchorage. Cape Collie is at the north side of the entrance to Wainwright Inlet, an extensive lagoon into which empties a considerable river from the interior. After lunch I accompanied Lieut. Dimock and the interpreter ashore, on a visit to the native village of Koog-mootz. On account of the shore ice making out some distance from the beach, we had great difficulty in landing and still greater danger in embarking again. Along the outer edge was a mass of detached pieces of ice that under the influence of the waves were bobbing up and down and constantly shifting their position. The greatest care had to be taken lest our small boat should be caught and crushed. And when we got upon the ice and attempted to make our way from one cake to another the peril was still greater. Although our heads and faces were covered with musquito netting, the little insects managed to get inside and make our stay ashore a torment. Arctic ptarmigan were abundant. The first party of natives we met were eating reindeer meat. Taking a large chunk in the left hand and fastening upon it with the teeth, a knife held in the right hand was passed upward close to the mouth, severing a piece as large as could be conveniently chewed. I think a beginner at this method of carving meat would slice off the end of his nose.

I counted twelve underground huts in the village, none of which were occupied. The larger portion of the people were inland hunting reindeer. The few remaining at the village were living in tents, their winter houses being partly filled with water. While on shore I walked out on the ice to the hull of the *George & Susan*. This bark was wrecked on the 10th of August, 1885, together with the *Mabel*. Three of the crew were drowned in getting ashore, and some of those that escaped were in an exceedingly critical condition for several hours after they were rescued by Capt. Healy and taken aboard of the revenue cutter *Corwin*, which was anchored in the neighborhood.

Early on July 25 we started in search of the "ice pack," which we found 5 miles away. After skirting the pack a short distance, the captain returned in shore and anchored off Point Belcher. At this point is another small village (She-rah-rack) of twelve winter hunts, which I visited. But three or four families remained in the place, the others being off hunting the reindeer.

On July 26 it snowed nearly all day. At 11 p. m. the captain again started out to examine the condition of the ice. After skirting the edge of the pack for some distance we returned and anchored of Cape Franklin. In the afternoon the captain changed his anchorage a few miles north, off Sea Horse Islands. While lying here at anchor Capt. Healy secured for me two nests and eggs of the eider duck.

We are now in the midst of the Arctic graveyard of ships. In the last 20 years from 75 to 80 vessels connected with the whale trade have been wrecked on the American side of the Arctic coast, and from 15 to 20 on the Asiatic side. In 1871 33 ships were caught in the ice near here and abandoned, and 1,200 sailors were cast helplessly on this sterile coast, with an insufficient supply of provisions, and for 100 miles the ice pack was solid between them and escape. There was then no refuge station at Point Barrow, but fortunately they were able to get south along the coast until they met some ships that took them off. Again, in 1876, 13 whaling vessels were caught in the ice off these same Sea Horse Islands and drifted helplessly to the north of Point Barrow, where they were abandoned. To the northward the *Daniel Webster* was crushed in the ice in 1881, the steamer *North Star* in 1882, and schooner *Clara Light* in 1885. A little to the south of this point the bark *John Howland* was stove in by the ice off Point Lay in 1883, steamer *Bow Head* off Point Belcher in 1884, the *Mabel* and *George and Susan* off Point Collie. A little west of this point the barks *Mt. Wollaston* and *Vigilant* were caught in the ice in 1879, and no tidings have ever come from vessels or crews. On the 8th of August, 1888, the barks *Fleetwing*, *Young Phœnix*, *Mary and Susan*, and schooner *Jane Gray* were lost in the ice off Point Barrow, 160 of their crew being rescued by Capt. Healy, who was in the vicinity. It is when a ship reaches the ice that extreme watchful-

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ness and care is demanded; the smallest change of wind, currents, or ice being noted and weighed, which means to the commanding officer days and nights of sleepless anxiety. It was in one of these seasons of anxiety that Capt. Healy spent 75 consecutive hours in the crow's nest at the masthead, his food being taken up to him.

On the 30th of July we were getting tired of our enforced delay. We had been a week off Point Belcher and Sea Horse Islands, waiting for the ice pack to swing off the shore and let us forward. That night, as we were upon deck watching the midnight sun, a large field of shore ice was seen drifting toward us. For a little the good ship held fast as the great cakes broke on her bow and ground against her sides; but by and by the pressure became too great and she dragged her anchor, and commenced drifting toward the shoals. Steam was at once raised, the anchor weighed, and the ship set at work bucking her way through the ice. Once under way the captain concluded to go on until again stopped by the ice. Threading his way carefully through masses of floating ice, he reached and anchored on the morning of July 31 off the village of Ootkeavie, near Point Barrow. Upon communicating with the shore it was found that the ice had left two days previous, and that the first vessels had arrived a few hours before. Masses of ice were still floating by in the current and grounded icebergs lay between the ship and the beach. Ootkeavie, next to Cape Prince of Wales, is the largest village on the Arctic coast, numbering about 300 people. In 1881, 1882, and 1883 it was occupied as one of the stations of the International Polar Expedition. The house built by Lieut. P. H. Ray for the use of the expedition has been leased to the Pacific Steam Whaling Company, and is used by them as a whaling station and trading post, the gentleman in charge being Mr. John W. Kelly, who has given the world an interesting monograph on the Arctic Eskimo, together with an Eskimo-English vocabulary. Both were published last spring by the United States Bureau of Education. This is also the location of the Government refuge station for shipwrecked whalers.

Within the past 10 years some 2,000 sailors have been wrecked on this Arctic coast. So far they have been fortunate in finding vessels within reach to carry them south to civilization, but the occasion is liable to come any season when they will be compelled to winter here. This to a large body of men means slow starvation and death. They could not subsist on the country, and there is no adequate provision within 1,500 or 2,000 miles; and when the long Arctic winter sets in no power on earth could reach them with help. To provide against any such horrible tragedy Capt. Healy early saw the necessity of having an ample supply of provisions stored at some central place in the Arctic. The plan grew and took shape in his own mind. He enlisted his friends and the men interested in the whaling industry, particularly in New Bedford and San Francisco, and finally, after many vexatious delays that would have discouraged a less persistent man, Congress voted the money for the erection of the buildings and the procuring of the provisions.

Last year Capt. Healy brought up the materials and erected the main building, which is a low one-story building, 30 by 48 feet in size. The walls, roof, and floor are made double, as a protection against the intense cold of this high northern latitude in winter. It will accommodate 50 men comfortably; it can shelter 100 if necessary. The house has provisions for 100 men 12 months, and is admirably adapted for its purpose. This year Capt. Healy had on board the material for the construction of a storehouse, also an additional supply of provisions, clothing, and coal.

The Ootkeavie is one of the villages selected by the United States Bureau of Education for the establishment of a school, the contract for which was given by Dr. Harris to the Board of Home Missions of the Presbyterian Church. The money necessary for its establishment was generously contributed by Mrs. Elliott F. Shepard, of New York. The teacher is Prof. L. M. Stevenson, of Versailles, Ohio, who reached the place on July 30, 1890. Owing to the shortness of the time and the great distance from the source of supplies, and the dangers of Arctic navigation, I was able to secure material this season for only two of the school buildings and teachers' residences to be erected in the Arctic. These were placed at Cape Prince of Wales and Point Hope. Next season I hope to erect one at Point Barrow. In the mean time, through the courtesy of Capt. Healy, representing the Treasury Department, I secured a room for the school in one of the Government buildings. This is the most northern school in America, and with but one exception in the world, being in latitude 71° 23′ north. At this point the trend of the continent turns to the eastward. However, on this point the ice has pushed a low ridge of sand, which extends from 8 to 10 miles farther north. On the end of this sand spit is a small village called Nu-

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wuk. On the sand spit midway between the villages is a hunting station, where the natives congregate for weeks in summer to kill ducks, as they pass to and fro from water to water over the sand spit. Thousands upon thousands are killed here every season.

On the day of our arrival I spent the whole time on shore arranging for the school. That evening the wind that had been freshening up all afternoon increased to a gale. The barometer was going down, down, down; heavy masses of ice were drifting by when the captain gave orders to weigh anchor and make a lee on the northeast side of Point Barrow, whither 16 vessels of the whaling fleet has preceded us. In a similar storm last summer, shortly after the *Bear* left her anchorage at Ootkeavie, the ice came in and piled up 30 feet high on the very spot the vessel had left. The storm proved the severest we had encountered this season, changing the configuration of the coast line for miles. At Ootkeavie, 20 tons of coal just landed for the use of the Government school, was either swept out to sea or buried deep under the sand—no trace of it could be found.

All day long, on the 1st of August, the gale howled and shrieked through the rigging, but the *Bear* rode it out in safety. In the evening a new danger presented itself. It was found that the great ice pack, which was only 5 to 7 miles distant was closing in upon the shore, and soon we would be prisoners shut up in an ice trap. From this there would be no escape until the wind changed and drove the ice again off shore. This was the condition of things on August 1, 1888. A number of the whalers had shifted, for protection, their anchorage from the west side of Point Barrow to the east side. The wind that had increased to a gale suddenly veered around from the southwest to the north, causing a heavy sea to break upon the bar. At 9 o'clock that night, the schooner *Jane Gray*, parted her cables and drifted against an iceberg—knocking a large hole in her side. She filled rapidly and sank, the crew taking to the small boats. The next to slip her moorings was the bark *Phœnix*. She struck the bar and sunk. Her crew drifted about in small boats for six hours in that terrible storm before they were picked up. Then the barks *Mary and Susan*, and *Fleetwing* went on to the bar and pounded to pieces. Several other vessels parted their cables, sustaining more or less danger.

In that fearful storm, when the waters of the Arctic were lashed into billows of foam, hurling masses of ice about like driving snow flakes, in the midst of snapping chains and crushing spars and tattered sails, when it seemed certain destruction to lower a small boat, the revenue cutter *Bear* rode the storm in safety, and her trained crew, under the direction of Cap. Healy, were venturing their lives and performing prodigies of valor in rescuing shipwrecked sailors. When the storm abated, 160 rescued men were on the decks of the *Bear*. On this occasion, fortunately for us, the storm abated before the ice reached us, and August 2 gave us a beautiful afternoon, of which I availed myself to go ashore.

The western and northern coast of America terminates at Point Barrow in latitude 71° 23′ north and longitude 156° 10′ west. Beyond this the coast trends to the eastward and southward. On the east side of the point is the native village of Nuwuk, which consists of a number of underground houses. But few families were home at the time of our visit, and they were mainly living in tents outside of their winter huts. The first white man to visit this place was Master Elson, of H. M. S. *Bossom* (Capt Beechey's expedition), in August, 1826. One hundred and forty-six miles to the eastward in Return Reef, the westernmost point reached by Sir John Franklin in his journey to form a junction with Capt. Beechey's expedition. The next visit by white men, was that of Capt. Simpson, of the Hudson Bay Company, who, in 1837, made the journey from the Mackenzie River.

During the winters of 1852, 1853, and 1854 H. M. S. *Plover* wintered in Elson Bay to the east of the point. Now a United States revenue marine vessel and many whaling ships visit the place annually.

Soon after returning to the *Bear* from the village, the captain was visited by Capt. Sherman, of the steam whaler *William Lewis*, and informed that the tender of the New Bedford whaling fleet, the bark *Thomas Pope*, which we had left but a few days before at anchor at Point Hope, was wrecked in the breakers at that point, on the 28th of July, and that the crew wished to be received on board the Government vessel and taken back to civilization. Consent having been obtained, the ten shipwrecked men were soon after sent on board. As the captain had on board the *Bear* the materials for a Government storehouse at the Point Barrow refuge station, he concluded to return at once to that place, and discharge his freight, that more comfortable quarters might be made for the shipwrecked sailors.

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The weather was beautiful, the ocean smooth, and the sail exhilarating. At midnight the sun was visible in the northwest, and the full moon in the southeast. At 1 a. m., August 3, the ship anchored at Ootkeavie, where we remained a week while the ship's carpenters were building the Government storehouse, and the captain inspecting the refuge station. During the week, among the callers was Mr. J. B. Vincent, the hero of the shipwreck of the bark *Napoleon*, off the cost of Siberia. Mr. Vincent is now second mate on the whaling bark *Abram Barker*.

One afternoon Capt. Gifford, of the bark *Abram Barker*, came on board and represented that his engineer, a Russian, had made two or three attempts to disable the engine, upon which the safety of the ship depended, that he had the man in irons, and requested Capt. Healy to take him off his hands, as a dangerous character. The accused man himself joined in the request, and was received on board. This is another instance of the many sided and anomalous character of the officers of a revenue vessel in these waters beyond the reach of courts and law. This is another instance where the commanding officer of the revenue service should have power to investigate, arrest, and commit criminals to the United States district court for trial. As it is, a man who endeavored to wreck a ship, and endangered many lives, goes free.

In 1882 Lieut. Ray's party dug a well to the depth of 37.5 feet for observing the temperature of the earth. The entire distance was made through frozen sand and gravel. At the bottom of the shaft the temperature remained, winter and summer, uniformly at 12° F. At the depth of 20 feet a tunnel was run 10 feet and then a room 10 by 12 feet size excavated for a cellar. In this room the temperature never rises above 22° F. Birds and meat, placed in this room, freeze solid, and remain so until taken to the kitchen and thawed out for cooking. While at the station I descended into this unique storage house. The carcasses of several reindeer and dozens of eider ducks were taken from it, and presented to the ship, making a very welcome addition to our table fare.

In the spring of 1883, 500 ducks were stored there at one time. At Ootkeavie the captain, at the request of the father, received on board a half-breed Eskimo boy, about 5 years of age, who is to be forwarded to the industrial training school at Sitka, for an education.

On Saturday, August 9, the inspection of the refuge station being completed, the storehouse finished, and arrangements for the school perfected, preparations were made to return southward. At 4:10 p. m. the anchor was weighed and the vessel steamed north a few miles to procure the last letters of the whaling fleet. The Stars and Stripes were hoisted to the top of the mainmast as a signal that we were about sailing. Soon after anchoring in the midst of the fleet the boats began arriving, bringing off packages of letters. At 9:15 p. m. the flag was lowered, the anchor weighed, and the *Bear* steamed slowly away en route to civilization. As we passed by the ships, one after another dipped their flags and bade us an Arctic farewell, with many wishes for a safe voyage. Great masses of heavy black clouds lay along the whole northern horizon, like a curtain to hide the unknown regions beyond. To the east of us lay the low land spit that marks the northern limit of the continent, the native village of underground huts, and the white canvas and skin covered tents of the visiting natives from the interior. To the west of us the sun was preparing, at 10 o'clock p. m., for a most gorgeous sunset; and south of us, as if symbolical of the lands of light, privilege, and comfort, to which we were to return, there was not a cloud to be seen in the beautiful sky. At 10 o'clock p. m. we passed the school and refuge station, and soon they faded from sight and were left far behind us, in their Arctic solitude, until the *Bear* again visits them a twelvemonth hence.

On the 11th of August the captain anchored off Cape Sabine to water ship. In this vicinity are extensive and valuable coal banks. On the beach were several deserters from the whaling ships, who begged hard to be received on board and taken out of the country. One of their number had been drowned. Every year men desert from the whalers; some of these die from exposure, others are picked up by the *Bear*, as in the present case, and a few remain in the country, descending at once to the level of the natives, demoralizing and doing them much more harm than a missionary can do good.

On the 12th, in rounding Cape Lisburne in a gale, the jib boom and sails were carried away, and the ship ran back and anchored in the lea of the cape. The country in the vicinity of the cape has been called the flower garden of the Arctic, on account of the number and variety of beautiful wild flowers. On the 13th, although the storm had not fully subsided, the *Bear* was got under way, and that afternoon anchored by the hull of the wrecked *Thomas Pope*, abreast of the schoolhouse at Point Hope. I went ashore, but found the schoolhouse locked up, and Dr. Driggs, the teacher, absent.

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On the morning of August 15, we bade good-by to Point Hope, and the following morning, at 8:40 o'clock, dropped anchor off Cape Blossom, Kotzebue Sound. The day being pleasant I accompanied an officer to the great international fair of the Arctic, some 12 miles distant from our anchorage. There were about 1,500 natives assembled from many and widely separated sections of the country—from Alaska and Siberia. Many were living in tents, but fully half had constructed shelters by turning their umiaks or boats upside down. As I passed their shelters, my attention was again and again called to the sick. To be sick beyond the reach of a physician, with poor care and poorer accommodations, and without knowledge of even the commoner remedies, is distress itself.

As I see these people, so kindly disposed in life, with a smile of welcome to the stranger, and then see them languishing in their comfortless shelters, with but a few days or weeks removed from death, my heart goes out to them in inexpressible longing, and I wish I could tell them the story of the Cross and introduce them to the hopes and joys of the gospel. Perhaps I may, at no distant day, secure for their children a mission and boarding school.

The beach was covered with racks, upon which hung long rows of salmon, drying for winter food. At 3:35 p. m., on the 27th, having a fair wind, the captain weighed anchor and sailed for Cape Prince of Wales. On the afternoon of the 19th, we passed through Bering Strait, and bade good-by to the Arctic Ocean. The sea was so rough that the captain gave up all hope of being able to land at the cape. But during the afternoon the wind died out and the sea calmed down, so that he was able to run in shore and anchor abreast of the village at 6 o'clock p. m. We could not have landed through the surf the day before, the day after, or at any other time that day. God's providence stayed the waves sufficiently long for us to visit the shore and transact our business.

Had we passed by without stopping the teachers would have been unable to send down their orders for the annual supply of provisions, and next year they would have been unsupplied. As it was I had four hours with them. The wind increasing, at 10 o'clock we were again under way. On the 20th we steamed by King and Sledge islands (the sea being too rough to land), and at noon on the 21st dropped anchor off St. Michael, Norton Sound. Soon after we had a call from Mr. Henry Newmann, agent of the Alaska Commercial Company, and Rev. William H. Judge, a Jesuit priest, who has lately come to the country to engage in the school work of the Roman Catholic Church on the Yukon River.

St. Michael is located on the first good site for a trading post north of the delta of the Yukon River, and is the headquarters of the trade of the Yukon valley. To this point the furs collected at the trading posts in the interior, some of them 2,000 miles distant, are brought for reshipment to San Francisco. About half a mile from the trading post is a small native village. The trading post was established by the Russians in 1835, and is now occupied by the Alaska Commercial Company. A blockhouse and some of the original buildings are still standing. Through the courtesy of Mr. Henry Newmann, two small Russian cannon, one of which was originally used in the defense of the place and the other in protecting the boating expeditions up the river, were secured for the collection of the Alaska Society of Natural History. At St. Michael I received a good account of the schools, nine of which receive their supplies and mails at this point.

It is said of one of the missionaries, who is some 2,000 miles, more or less, up the river, that when he saw his freight bill of $125 per ton for transportation from St. Michael to his station, he added a petition in his prayer that freight might be reduced. During the stay at St. Michael two interesting boys, William and George Frederickson, from Anvik, on the Yukon River, were received on board to accompany me East. Their father, a trader, is sending them to New York for an education. After a pleasant visit of two days, the *Bear* took her departure for Nunivak island. On the following Sabbath night, and through all Monday, we were steaming around the island, that the captain might secure the census. Finding that the people were scattered, hunting and fishing, and being warned by the few natives he met of dangerous rocks and reefs, and the waters being uncharted, on Monday evening the captain turned around and steamed for St. George Island, which we reached on the morning of August 27. Nearing the island, a schooner was seen crowding on all sail to get out of our way. As the captain had not yet received his instructions, which were awaiting his arrival at Unalaska, and had no authority to make any seizures, the schooner was allowed to proceed unmolested. She was one of the many piratical vessels that are fitted out at Victoria, British Columbia, and San Francisco, to hunt seals in Bering Sea contrary to law. In 1886 there were 21 such vessels from Victoria alone, and the catch was 35,556 skins. In 1887 there were

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20 vessels from Victoria, 8 of which were seized; the catch was 27,624 skins. In 1888 there were 19 British vessels, with a total catch of nearly 30,000 skins. In 1889, 23 British vessels, and this year 22 British and 12 American vessels engaged in seal piracy. Their methods of operation are so wasteful that the number of skins taken does not begin to represent the number of seals killed. They necessarily hunt out to sea, where they largely kill the females heavy with their young. A large percentage of the seals shot sink before they can be secured, so that many authorities state that the 20,000 to 30,000 secured represent from 150,000 to 200,000 seals destroyed. This wasteful method is rapidly annihilating the fur seal, so that if our granddaughters are to have seal-skin sacques the Government will need to take more stringent measures for the protection of the seal. The indiscriminate slaughter of the seal while passing to their breeding grounds has caused such a scarcity on the seal islands, that while the Government allows 100,000 males to be taken annually, this year the vessels have been able to secure but 21,000 skins.

The piratical vessels fitted out at Victoria, British Columbia, to hunt seal have caused the international complications known as the "Bering Sea difficulty," which are now the subject of negotiations between the State Department and Great Britain.

WHALING INDUSTRY.

As early as the year 1841 fifty whaling vessels had found their way from New Bedford and Boston to Bering Sea. From 1842 and onward for a number of years annual complaints were made to the Russian Government by the Russian-American Fur Company of the encroachments of the Yankee whalers. In 1852 the whaling fleet had increased to 278 vessels, and the value of the catch to $14,000,000. This was probably the most profitable year of the whaling industry in Alaska. Since then it has, in the main, decreased, until in 1862 the value of the catch was less than $800,000. This increased again in 1867 to $3,200,000. In 1880 the first steamer was added to the whaling fleet, being sent out from San Francisco. Last year there were 26 vessels from San Francisco and 23 from New New Bedford engaged in the trade. They captured 151 whales, which yielded 213,070 pounds of whale bone and 12,243 barrels of oil. This season there are 10 steamers and 38 sailing vessels employed in these northern waters with a very light catch up to midsummer. The whaling vessels are manned upon the co-operative plan; the men instead of being paid regular wages receive a percentage of the profits. The captain on the sailing vessels receives a twelfth, the first mate a nineteenth, the second mate and boat headers each a twenty-fifth, the third mate a thirtieth, the fourth mate, carpenter, cooper, and steward each a fiftieth, and the sailors each a one hundred and seventy-fifth. On steamers the rates are a little lower. A captain's wages range from nothing to $7,000 or $8,000, according to the number of whales taken. If the ship gets six whales during a cruise the captain will have about $1,400 and a sailor $100. The sailors usually receive an advance of $60, and during the cruise are allowed to draw clothing, tobacco, etc., from the ship's supplies (called the "slop chest") to the amount of $60 to $80. Consequently if there are no profits to divide the sailor is sure of about $140. The captains and higher officers are usually men of more than ordinary character and intelligence—typical American seamen of the best kind. The common sailors on a whaler are made up largely of Portuguese, Italians, South Sea Islanders, and others of an inferior grade, some of them being, emphatically, hard cases.

A few years ago whales were plentiful in the North Pacific, Bering, and Okhotsk Seas. Then they were followed through Bering Straits a little way into the Arctic. Then farther and farther the whales have been driven into the inaccessible regions of the North, until now the whaling fleet annually rounds the most northern extremity of the American continent, and this year, for the first time, a few of them will winter in the Arctic, at the mouth of the Makenzie River. To escape this deadly pursuit the whales try to hide in the ice, and after them the whalers boldly force their way. The business is so dangerous that during the last 20 years more than 100 vessels have been lost. The value of the whale fisheries consists not so much in the oil taken, as in the whale-bone, which is taken from his mouth; this is worth between $4.50 and $5 per pound. The product of a fair sized, bowhead whale, at present prices, is worth about $8,000. A good sized whale weighs about 150 tons, and contains about 2,000 pounds of whalebone after it is cleaned. His tongue is 15 feet long, from 6 to 8 feet in thickness, and contains 12 barrels of oil. His open mouth is from 15 to 20 feet across;

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his tail from 15 to 18 feet across. The blubber forms a coat around him from 10 to 22 inches thick. It is 4 feet from the outside of the body to his heart, and the heart is 216 cubic feet in size, while the brains will fill a barrel.

While lying at anchor at St. George, the United States Revenue Marine steamer *Rush*, Capt. Coulson commanding, dropped anchor near us, and we received two and one-half months later news from the outside world. With visiting on shipboard and on land, the day slipped by very rapidly and pleasantly, and the following morning we were under way for Unalaska, reaching there on the 29th of August. At Unlaska I received letters from Eastern friends, the latest being dated June 3.

THE ESKIMOS OF ALASKA.

During June, July, and August, I cruised 5,000 miles along the coasts of Asia and America, from the Aleutian Islands to Point Barrow, the northern limit of the continent, and back to Unalaska. I visited all the principal settlements of the coast, and saw much of the native people. These people all belong to the Innuit or Eskimo family. They occupy not only the Arctic and Bering Sea coasts, but also that of the mainland coast of the North Pacific, as far east as mount St. Elias, and number in all about 17,000 to 20,000. In the extreme north, at Point Barrow, and along the coast of Bering Sea, they are of medium size. At Point Barrow the average height of the males is 5 feet 3 inches, and average weight 153 pounds; of the women, 4 feet 11 inches, and weight 135. On the Nushagak River the average weight of the men is from 150 to 167 pounds.

From Cape Prince of Wales to Icy Cape, and on the great inland rivers emptying into the Arctic Ocean, they are a large race, many of them being 6 feet and over in height. They are lighter in color and fairer than the North American Indian, have black and brown eyes, black hair (some with a tinge of brown), high cheek bones, fleshy faces, small hands and feet, and good teeth. The men have thin beards. Along the Arctic coast the men cut their hair closely on the crown of the head, giving them the appearance of monks; this is done so that when crawling up to the deer, the latter will not be frightened away by the flutter of the hair in the wind. Some of the young are fairly good looking, but, through exposure and hardship, become old at 30 years of age. They are naturally intelligent, ingenious in extricating themselves from difficulties, fertile in resources, and quick to adopt American ways and methods when they are an improvement on their own. Physically they are very strong, with great powers of endurance. When on a journey, if food is scarce, they will travel 30 to 40 miles without breaking their fast. Lieut. Cantwell, in his explorations of the Kowah River, makes record that upon one occasion when he wanted a heavy stone for an anchor, a woman went out, and, alone, loaded into her birch bark canoe, and brought him a stone that would weigh 800 pounds. It took two strong men to lift it out of the canoe.

Another explorer speaks of a woman carrying off on her shoulder a box of lead weighing 280 pounds. This summer, in erecting the school buildings in the Arctic, there being no drays or horses in that country, all the timber, lumber, hardware, etc., had to be carried from the beach to the site of the house on the shoulders of the people. The women carried the same loads as the men. They are, as a rule, industrious; men, women, and children doing their individual part toward the family support. The hard struggle for a bare existence in the sterile region where they live compels it. In a general way they are honest. Property intrusted to them by the whites is kept secure. Property stowed away in a cache or tent needs no lock or watchman—it is safe. Small articles left lying around uncared for are soon picked up and carried off. Perhaps they look upon them as if they had been thrown away. A white man can leave with one of them who is an entire stranger to him $100 or $200 worth of goods, saying, "Buy me some furs and I will be back here next year." The following season the native, with the furs, is in waiting for the expected arrival. This is done every season. I have the account-book of one of these native traders in which he has recorded every skin purchased, and how much of each article paid for it. As the native can neither read, write, nor speak English, and his own language is an unwritten one, of course the accounts are kept by symbols and signs. They are shrewd traders. No matter how much is offered for an article, they ask for more. If they set the price themselves, and the purchaser accedes to it, they frequently attempt to raise it. They are exceedingly dirty and filthy in their persons and clothing. But perhaps this is somewhat excusable in a country where, in winter, water is scarce and soap scarcer. I remember once hearing a very successful missionary, who had spent many years north of the Arctic Circle, say that he

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tried to make it a rule, when traveling with a dog sled, to wash his face at least once a week, but that he had not always been able to do it. The Alaska Eskimo is a good-natured, docile, and accommodating race. Wherever I met them, and under whatever circumstances, they had a smile of welcome, and in many ways showed a friendly spirit. They have also manifested an unexpected interest in the establishment of schools among them, which promises well for the future.

ORNAMENTATION.

Among the Thlinket people of southeastern Alaska the labret is worn by the women only. Among the Eskimo of northwestern Alaska, on the contrary, it is worn by the men alone. The use of it is almost universal.

During boyhood a hole is cut through the lower lip below each corner of the mouth and an ivory plug inserted until the wound heals. After healing, the hole is stretched from time to time until it reaches about half an inch in diameter. Into this they insert the labret.

These labrets are made of stone, jade, coal, ivory, bone, and glass. They are shaped like a silk hat in miniature. The labret is three-fourths of an inch in diameter, 1 inch in diameter at the rim, and 1 inch long. The rim is kept inside of the mouth and holds the labret in place.

Many wear this form of labret on the one side of the mouth, and on the other a much larger one, resembling a large sleeve-button, 1⅜ inches in diameter on the outside, 1¼ inches on the inside rim, and one-half inch neck.

Formerly they wore a large labret in the center of the lower lip. I secured a beautiful one of polished jade that has an outside surface 2½ inches by 1 inch.

The girls have their ears and sometimes their noses pierced, wearing pendant from them copper, ivory, and bone ornaments, also strings of beads. Sometimes these beads extend from one ear to the other, either under the chin or back of the head.

Both sexes tatoo, more or less elaborately, their faces, hands, and arms. Both sexes wear bracelets, amulets, and sometimes fancy belts.

DRESS.

They make waterproof boots of seal skin, with walrus or sea-lion hide soles. For cold weather the boots are made of seal or reindeer skin, tanned with the hair on, and walrus-hide soles.

The foot portion is made many times larger than the foot, in order to give room for a padding of grass. These boots are so much warmer and more comfortable than the ordinary leather ones that they are almost universally used by whalers and others who have occasion to visit Arctic regions. A fur shirt and a pair of fur pants complete the toilet. The shirt is called a parka, and frequently has a hood attached, which can be pulled over the head in a storm. Others have a fur hood which, when not on the head, hangs around the neck. Ordinarily in summer the head is uncovered.

In winter two suits are worn, the inner one with the fur next to the body, and the outer one with the fur to the weather.

The difference between male and female attire is in the shape and ornamentation of the parka. Among some of the tribes the pants and boots of the women are in one garment. There is also a fullness in the back of the woman's parka to make room for the carrying of the baby inside between the shoulders of the mother. These clothes are made largely of the skins of the reindeer, squirrels, and birds. From the intestines of the seal and walrus and also from salmon skins are made the famous kamleika, a waterproof garment, which is worn over the others in wet weather. The kamleika is lighter in weight and a better waterproof garment than the rubber garments of commerce.

The native dress, when well made, new and clean, is both becoming and artistic.

FOOD.

They live principally upon the fish, seal, walrus, whale, reindeer, and wild birds of their country. Latterly they are learning the use of flour, which they procure from the Government revenue vessels or barter from the whalers.

They have but few household utensels. A few have secured iron kettles. Many still use grass-woven baskets and bowls of wood and stone. Occasionally is found a jar of burnt clay. In these native dishes water was boiled by dropping in hot stones.

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Among the more northern tribes much of the food is eaten raw, and nothing is thrown away, no matter how rotten or offensive it has become.

Some of their choicest delicacies would be particularly disgusting to us. Having, at one of the bird rookeries in the Arctic, gathered a number of eggs, it was found that many of them contained chickens. When about to throw them overboard, the native interpreter remonstrated, saying: "No! me eat them. Good!"

All classes have a great craving for tobacco and liquor. Even nursing babes are seen with a quid of tobacco in their mouths.

During the summer large quantities of fish are dried, and the oil of the seal, walrus, and whale put up for winter use. The oil is kept in bags made of the skin of the seal, similar to the water-skins of Oriental lands. The oil is kept sweet by the bags being buried in the frozen earth until wanted for use.

DWELLINGS.

The coast Eskimo have underground permanent houses in villages for winter, and tents that are frequently shifted for summer.

The Eskimo of the interior, being largely nomads, live in tents much of the time. The tents are covered with reindeer skins, walrus hides, or cotton canvas. In making a winter house, a cellar from 20 to 25 feet square is dug, from 3 to 5 feet deep. At the corners and along the sides of the excavation are set posts of driftword or whalebone. On the outside of these, poles of driftwood are laid up one upon another to the top. Other timbers are placed across the top, forming the roof or ceiling. Against the outside and upon the roof, dirt and sod are piled until the whole has the appearance of a large mound. In the center of the dome is an opening about 18 inches across. Across this is stretched the transparent bladder of the seal or walrus. This opening furnishes light to the room below. A narrow platform extends along one or more sides of the room, upon which are stowed the belongings of the family and the reindeer-skin bedding. The platform is also the sleeping-place of the family.

Large, shallow dishes of earthenware, bone, or stone, filled with seal oil, are the combined stove and lamp of the family. Some lighted moss makes a dull line of flame along the edge of the dish. Frequently a piece of blubber is suspended over the flame, the dripping of which keeps the lamp replenished.

Many of the houses were so warm that we found our usual outdoor clothing burdensome.

At one side of some rooms, and in the floor near the center of the room in others, is a small opening about 20 inches square. This is the doorway, and leads to a hall or outside room. If the opening is in the side of the room, a reindeer skin curtain hangs over it. This outer place is sometimes a hall 12 to 15 feet long and 2 feet wide and high, leading to a well or shaft. This shaft is 6 or 7 feet deep, and leads up a rude ladder into the open air. In other cases it is a large room 12 or 15 feet square, containing, on either side of the passageway through the center, a place to store the winter supplies of oil, fish, and flour. The exit from the storeroom is similar to that from the hall, up a ladder and through a small hole. When a storm is raging outside this hole is covered with a board or flat stone or large, flat whalebone.

All villages of importance contain a public room or town hall. This is built in the same manner as the private dwellings, only much larger. Some of these are 60 feet square, 20 feet high, and contain three tiers or platforms. This building is called the kashima or kashga. In them are held the public festivals and dances. They are also the common workshop in which the men make their snowshoes, dog sleds, spears and other implements.

The villages, from the deck of a coasting vessel, have the appearance of so many hillocks or dunes along the beach.

IMPLEMENTS.

The Eskimo of Arctic Alaska are still in the stone age. The manufacture of arrows and spear heads from flint is a living industry. Stone lamps, stone hammers and chisels, and to some extent stone knives, are still in ordinary use among them. Fish lines and nets and bird snares are still made of whalebone, sinew, or rawhide. Arrows, spears, nets, and traps are used in hunting, although improved breach-loading arms are being introduced among them, and will soon supersede, for the larger game, their own more primitive weapons.

For transportation on land they have the snowshoe, dog team, and sled; and on the water the kiak and umiak.

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The kiak is a long, narrow, light, graceful, skin-covered canoe, with one, two, or three holes, according to the number of people to be carried. It is the universal boat of the Eskimo, and is found from Greenland around the whole northern coast of America, wherever that people are found.

The umiak is a long, skin-covered boat. This is the family boat or carryall. Those in use around Bering Straits are about 24 feet long and 5 feet wide. They will safely carry 15 persons and 500 pounds of freight, coasting in the sea. Those on Kotzebue Sound, in the Arctic Ocean, are 35 feet long, 6 feet wide, with a capacity of 3,000 pounds of freight, and a crew of 6. There are exceptionally large ones that will carry from 50 to 80 people. Both the kiaks and umiaks are made of walrus, sea lion, or white whale hides stretched over light frames of spruce wood.

MARRIAGE.

There seems to be no special ceremony among them connected with marriage. If the parties are young people, it is largely arranged by the parents.

Among some of the tribes the husband joins his wife's family and is expected to hunt and fish for them. If he refuses to give his father-in-law the furs he takes he is driven out of the house and some one else more active or obedient is installed as husband of the girl. Sometimes a young woman has ten or twelve husbands before she fairly settles down. Under this condition of things it is not strange that the women become indifferent and often untrue to their husbands. Love and mutual affection has so little to do with the relation that upon occasion husbands and wives are interchanged.

For instance, in one of the northern villages dwelt a family of expert fishers and another that was successful at hunting the reindeer. One year the fisherman thought he would like to hunt reindeer. Finding that his neighbor would like to try fishing, they exchanged wives for the summer. The woman who was a good hunter went off with the fisherman and *vice versa*. Upon reaching home in the fall, they returned to their respective husbands.

Again a certain man wished to make a long journey into the interior. His wife being sick and unable to endure the hardships of the trip, he arranged with a friend, who had a strong, healthy wife, for an exchange until he should return. This was done with the consent of all parties. Wives are frequently beaten by their husbands, and sometimes, to escape abuse, commit suicide. In the winter of 1889 a woman at Point Hope who had been beaten and stabbed by her jealous husband one night during a raging blizzard harnessed the dogs to the sled, then fastening one end of a rope to the sled and the other as a noose around her neck, she started up the team and was choked and dragged to death. Occasionally a wife resists, and, if physically the stronger, thrashes the husband. Polygamy prevails to a limited extent. Frequently the second wife is looked on and treated as a servant in the family. Among some of the tribes the custom prevails of the sons having the same number of wives as the father, without reference to their ability to maintain them. No more, no less, than a species of hereditary polygamy.

Among the Eskimo, the same as among all uncivilized people, woman's is a hard lot. One of the missionary ladies writes: "My heart aches for the girls of our part of Alaska. They are made perfect prostitutes by their parents from the time they are 9 or 10 years old until that parent dies. And yet, notwithstanding all their disadvantages, they have a voice in both family and village affairs. The husband makes no important bargain, or plans a trip, without consulting and deferring to his wife."

The customs pertaining to childbirth are barbarous, and it would not be strange if both mother and child should perish. Large families of children are the exception; few have above four. The drudgery of women is such that they often destroy their unborn and sometimes born offspring, particularly if the child is a girl. A missionary gives the following incident: "Some one tied a helpless little child of about two years down to the water's edge at low tide. Its cries attracted the attention of a passer-by, who found the water already nearly up to his back. The man took it to his home and cared for it. It was recognized as a child that had been left in the care of an old woman; the child was sickly, and doubtless was too much of a care for her. The only surprise expressed by the people was that any one should want to drown or kill a boy."

If a family is very poor they sometimes give away to childless neighbors all their children but one. Thus, during childhood, a boy may pass from one to another to be adopted by several families in turn. Children are also sold by their parents, the usual market price of a child being a sealskin bag of oil or an

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old suit of clothes. During infancy children are carried under the parka, astride of the mother's back, being held in position by a strap under the child's thighs and around the mother's body across the chest. When out from under the parka, they are carried seated on the back of the mother's neck and shoulders, with the child's legs hanging down in front on both sides of the neck. The children are given the names of various animals, birds, fish, sections of country, winds, tides, heavenly bodies, etc. Sometimes they have as many as six names. Children are rarely punished—generally have their own way, and are usually treated with great kindness by their own or foster parents. Prominent events in the life of a boy, such as having his hair cut for the first time, like a hunter—his first trip to sea in a kiak—his first use of snowshoes, etc.—are celebrated by a feast if the family are not too poor.

FESTIVALS.

Different tribes have different festivals. Among others there is usually one for every animal hunted by the people. A whale dance, seal, walrus and reindeer dances, etc. There are festivities for the spirits of wives, land and sea, dead friends, sleds, boats, etc. Some of these are held during the long winter darkness, and others, with dancing, wrestling, and foot-racing, at the great annual gathering in summer.

SUPERSTITIONS.

Like all other ignorant people, they are firm believers in witchcraft and spirits generally. They also believe in the transmigration of souls. That spirits enter into animals and inanimate nature, into rocks, winds, and tides. That they are good or bad according as the business, the community, or the individual is successful or unsuccessful, and that these conditions can be changed by sorcery. By suitable incantations they firmly believe that they can control the wind and the elements, that they can reward friends and punish enemies.

The foundation of their whole religious system is this belief in spirits and the appeasing of evil spirits. This demon or evil spirit worship colors their whole life and all its pursuits. Every particular animal hunted, every phenomenon of nature, every event of life, requires a religious observance of its own. It is a heavy and burdensome work that darkens their life—it leads to many deeds of unnatural cruelty. At the mouth of the Kuskokwine River an old woman was accused of having caused the death of several children—of being a witch. This was so firmly believed that her own husband pounded her to death, cut up her body into small pieces, severing joint from joint, and then consuming it with oil in a fire.

SHAMANS.

The head and front of this great evil is the Shaman, or sorcerer. He is believed to be the only one that can control the evil spirits and protect the people from them. Mr. John W. Kelly, who has written recently an interesting monogram on the Eskimo, represents the Shamans as divided into seven degrees, being graded according to their knowledge of spiritualism, ventriloquism, feats of legerdemain and general cunning. It is claimed that those of the seventh degree are immortal, and can neither be killed nor wounded; that those of the sixth degree can be wounded, but not killed. The ordinary Shaman belongs to the lower degrees and only claims to go into trances, in which state his spirit leaves the body and roams abroad procuring the information his patrons are in search of.

As a rule the Shamans are unscrupulous frauds, thieves, and murderers, and should be put down by the strong hand of the General Government.

SICKNESS.

The prevailing diseases among the Eskimo are scrofula, diphtheria, pneumonia, and consumption, and the death rate is large. They have a superstitious fear with reference to a death in the house, so that when the sick are thought to be nearing death they are carried out of the home and placed in an outhouse. If they do not die as soon as they expect, they ask to be killed, which is usually done by the Shaman stabbing them in the temple or breast. The aged and help-

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less are also sometimes killed at their own request. A prominent man in a tribe not long since tried to hire men to kill his aunt, who was insane and dependent on him. Failing to have her killed, he deliberately froze her to death. The cruelty of heathenism is almost beyond belief. The dead are wrapped up in reindeer or seal skins and drawn on a sled back of the village, where they are placed upon elevated scaffolds, out of the reach of animals, or upon the ground and covered over with driftwood, or, as among some of the tribes, left upon the ground, to be soon torn in pieces and devoured by the dogs of the village.

GOVERNMENT.

The Eskimos have no tribal organization and are without chiefs. The most successful trader among them becomes the wealthiest man and is called Umaillik. By virtue of the influence that riches exert he is considered the leader in business transactions. In special exigencies, affecting a whole village, the old men assemble and determine upon a plan of action. The Shamans also have great influence among the people. It often happens that the Umaillik and Shaman are the same person.

FOOD SUPPLY.

From time immemorial they have lived upon the whale, the walrus, and the seal of their coasts, the fish and aquatic birds of their rivers, and the caribou or wild reindeer of their vast inland plains.

The supply of these in years past was abundant and furnished ample food for all the people. But fifty years ago American whalers, having largely exhausted the whale in other waters, found their way into the North Pacific Ocean. Then commenced for that section the slaughter and destruction of whales that went steadily forward at the rate of hundreds and thousands annually, until they were destroyed and driven out of the Pacific Ocean. They were then followed into Bering Sea, and the slaughter went on. The whales took refuge among the ice fields of the Arctic Ocean, and thither the whalers followed. In this relentless hunt the remnant have been driven still farther into the inaccessible regions around the north pole, and are no longer within reach of the natives.

As the great herds of buffalo that once roamed the western prairies have been exterminated for their pelts, so the whales have been sacrificed for the fat that encased their bodies and the bone that hung in their mouths. With the destruction of the whale one large source of food supply for the natives has been cut off.

Another large supply was derived from the walrus, which once swarmed in great numbers in those northern seas. But commerce wanted more ivory, and the whalers turned their attention to the walrus, destroying thousands annually for the sake of their tusks. Where a few years ago they were so numerous that their bellowings were heard above the roar of the waves and grinding and crashing of the ice fields, this year I cruised for weeks without seeing or hearing one. The walrus as a source of food supply is already practically extinct.

The seal and sea lion, once so common in Bering Sea, are now becoming so scarce that it is with difficulty that the natives procure a sufficient number of skins to cover their boats, and their flesh, on account of its rarity, has become a luxury.

In the past the natives, with tireless industry, caught and cured for use in their long winters great quantities of fish, but American canneries have already come to one of their streams (Nushagak) and will soon be found on all of them, both carrying the food out of the country and by their wasteful methods destroying the future supply. Five million cans of salmon annually shipped away from Alaska—and the business still in its infancy—means starvation to the native races in the near future.

With the advent of improved breech-loading firearms the wild reindeer are both being killed off and frightened away to the remote and more inaccessible regions of the interior and another source of food supply is diminishing.

Thus the support of the people is largely gone and the process of slow starvation and extermination has commenced along the whole Arctic coast of Alaska. Villages that once numbered thousands have been reduced to hundreds; of some tribes but two or three families remain. At Point Barrow, in 1828, Capt. Beechey's expedition found Nuwuk a village of 1,000 people; in 1863 there were

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309; now there are not over 100. In 1826 Capt. Beechey speaks of finding a large population at Cape Franklin; to-day it is without an inhabitant. He also mentions a large village of 1,000 to 2,000 people on Schismareff Inlet; it has now but three houses.

According to Mr. John W. Kelly, who has written a monograph upon the Arctic Eskimo of Alaska, Point Hope, at the commencement of the century, had a population of 2,000; now it has about 350. Mr. Kelly further says: "The Kavea county is almost depopulated owing to the scarcity of game, which has been killed or driven away. * * * The coast tribes between Point Hope and Point Barrow have been cut down in population so as to be almost obliterated. The Kookpovoros of Point Lay have only three huts left; the Ootookas of Icy Cape one hut; the Koogmute has three settlements of from one to four families: Sezaro has about 80 people."

Mr. Henry D. Woolfe, who has spent many years in the Arctic region, writes: "Along the seacoast from Wainright Inlet to Point Lay numerous remains of houses testify to the former number of the people. * * * From Cape Seppings to Cape Krusenstern and inland to Nounatok River there still remain about 40 people, the remnant of a tribe called Key-wah-ling-nach-ah-mutes. They will in a few years entirely disappear as a distinctive tribe."

I myself saw a number of abandoned villages and crumbling houses during the summer, and wherever I visited the people I heard the same tale of destitution.

On the island of Attou, once famous for the number of its sea-otter skins, the catch for the past nine years has averaged but 3 sea-otter and 25 fox skins, an annual income of about $2 for each person. The Alaska Commercial Company this past summer sent $1,300 worth of provisions to keep them from starving.

At Akutan the whole catch for the past summer was 19 seaotters. This represents the entire support of 100 people for twelve months. At Unalaska both the agent of the Alaska Commercial Company and the teacher of the Government school testified that there would be great destitution among the people this winter because of the disappearance of the sea otter. At St. George Island the United States Treasury agent testified that there was not sufficient provisions on the island to last through the season, and asked that a Government vessel might be sent with a full supply. At Cape Prince of Wales, Point Hope, and Point Barrow was the same account of short supply of food. At the latter place intimations were given that the natives in their distress would break into the Government warehouse and help themselves to the supply that is in store for shipwrecked whalers. At Point Barrow, largely owing to the insufficient food supply, the death rate is reported to the birth rate as 15 to 1. It does not take long to figure out the end. They will die off more and more rapidly as the already insufficient food supply becomes less and less.

INTRODUCTION OF REINDEER.

In this crisis it is important that steps should be taken at once to afford relief. Relief can, of course, be afforded by Congress voting an appropriation to feed them, as it has done for so many of the North American Indians. But I think that every one familiar with the feeding process among the Indians will devoutly wish that it may not be necessary to extend that system to the Eskimo of Alaska. It would cost hundreds of thousands of dollars annually, and, worse than that, degrade, pauperize, and finally exterminate the people. There is a better, cheaper, more practical, and more humane way, and that is to introduce into northern Alaska the domesticated reindeer of Siberia, and train the Eskimo young men in their management, care, and propagation.

This would in a few years create as permanent and secure a food supply for the Eskimo as cattle or sheep raising in Texas or New Mexico does for the people of those sections.

It may be necessary to afford temporary relief for two or three years to the Eskimo, until the herds of domestic reindeer can be started, but after that the people will be self-supporting.

As you well know, in the Arctic and sub-Arctic regions of Lapland and Siberia the domesticated reindeer is food, clothing, house, furniture, implements, and transportation to the people. Its milk and flesh furnish food; its marrow and tongue are considered choice delicacies; its blood, mixed with the contents of its stomach, is made into a favorite dish called in Siberia "manyalla;" its intestines are cleaned, filled with tallow, and eaten as a sausage; its skin is made into clothes, bedding, tent covers, reindeer harness, ropes, cords, and fish lines; the hard skin of the forelegs makes an excellent covering for snowshoes.

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Its sinews are dried and pounded into a strong and lasting thread; its bones are soaked in seal oil and burned for fuel; its horns are made into various kinds of household implements, into weapons for hunting and war, and in the manufacture of sleds.

Indeed, I know of no other animal that in so many different ways can minister to the comfort and well-being of man in the far northern regions of the earth as the reindeer.

> The reindeer form their riches: these their tents,
> Their robes, their beds, and all their homely wealth supply;
> Their wholesome fare and cheerful cups.

Under favorable circumstances a swift reindeer can traverse 150 miles in a day. A speed of 100 miles per day is easily made. As a beast of burden they can draw a load of 300 pounds. They yield a cupful of milk at a milking; this small quantity, however, is so thick and rich that it needs to be diluted with nearly a quart of water to make it drinkable. It has a strong flavor like goat's milk, and is more nutritious and nourishing than cow's milk. The Laps manufacture from it butter and cheese. A dressed reindeer in Siberia weighs from 80 to 100 pounds. The reindeer feed upon the moss and other lichens that abound in the Arctic regions, and the farther north the larger and stronger the reindeer.

Now, in Central and Arctic Alaska are between 300,000 and 400,000 square miles (an area equal to the New England and Middle States combined, together with Ohio, Indiana, and Illinois) of moss-covered tundra and rolling plains of grass that are specially adapted by nature for the grazing of the reindeer and is practically useless for any other purpose.

If it is a sound public policy to bore artesian wells and build water-storage reservoirs, by which thousands of arid acres can be reclaimed from barrenness and made fruitful, it is equally a sound public policy to stock the plains of Alaska with herds of domesticated reindeer, and cause those vast, dreary, desolate, frozen, and storm-swept regions to minister to the wealth, happiness, comfort, and well-being of man. What stock-raising has been and is on the vast plains of Texas, Colorado, Wyoming, and Montana, reindeer-raising can be in northern Alaska. In the corresponding regions of Lapland, in Arctic Norway, and in Sweden and Russia are 27,000 people supporting themselves (besides paying a tax to the Government of $400,000, or $1 per head for their reindeer) and procuring their food and clothing largely from their 400,000 domesticated reindeer. Also in the corresponding regions of Siberia, with similar climate, soil, and environment (and only 40 miles distant at the straits), are thousands of Chukchees, Koraks, and other tribes fed and clothed by their tens of thousands of domesticated reindeer.

During the summer I visited four settlements of natives on the Siberian coast, the two extremes being 700 miles apart, and saw much of the people, both of the Koraks and Chukchees. I found them a good-sized, robust, fleshy, well-fed, pagan, half-civilized, nomad people, living largely on their herds of reindeer. Families own from 1,000 to 10,000 deer. These are divided into herds of from 1,000 to 1,500. One of these latter I visited on the beach near Cape Navarin. In Arctic Siberia the natives with their reindeer have plenty; in Arctic Alaska without the reindeer they are starving.

Then instead of feeding and pauperizing them let us civilize, build up their manhood, and lift them into self-support by helping them to the reindeer. To stock Alaska with reindeer and make millions of acres of moss-covered tundra conducive to the wealth of the country, would be a great and worthy event under any circumstances.

But just now it is specially important and urgent from the fact that the destruction of the whale and walrus has brought large numbers of Eskimo face to face with starvation, and that something must be done promptly to save them.

The introduction of the reindeer would ultimately afford them a steady and permanent food supply.

INTRODUCTION OF CHRISTIANITY.

In the Tenth United States Census Report, on page 2, it is recorded: "That no trace or shadow of Christianity and its teachings has found its way to these desolate regions: the dark night of Shamanism or Sorcery still hangs over the human mind. These people share with their Eastern kin a general belief in evil

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spirits and powers, against whom the Shaman alone can afford protection by sacrifices and incantations. No philanthropic missionary has ever found his way to this Arctic coast, and unless some modern Hans Egede makes his appearance among them in the near future there will be no soil left in which to plant the Christian seed."

Such was the dark but true picture in 1880, but the dawn was near at hand. The needs of the Eskimos had long been upon my mind, and various plans for reaching them had been considered. In the spring of 1888, having an opportunity of visiting Bethlehem, Pa., I secured a conference with the late Edmund de Schweinitz, D. D., a bishop of the Moravian Church, and urged upon him the establishment of a mission to the Eskimo of Alaska. A few days later the request was repeated in writing, which letter, on the 23d of August, 1883, was laid before the Moravian Society for Propagating the Gospel among the Heathen. The request was favorably considered, and Rev. A. Hartman and Mr. Wm. H. Weinland were appointed a committee to visit Alaska and report on the advisability of commencing a mission. This tour of exploration was made in the summer of 1884, and is given in my annual report for 1885-'86. Upon their return they recommended the establishment of a mission on the Kuskokwim River, near the native village of Mumtreklagamute, 75 miles above the mouth of the stream. In the spring of 1885 Rev. and Mrs. Wm. H. Weinland, Rev. and Mrs. John H. Kilbuck, and Mr. Hans Torgersen were sent to the Kuskokwim River as the first missionaries to the Eskimo of Alaska. The present mission force consists of Rev. and Mrs. John H. Kilbuck, Rev. and Mrs. Ernst L. Webber, and Miss Lydia Lebus. In the summer of 1886 the Moravians sent out the Rev. Frank E. Wolff, who located a station and erected a mission station at the mouth of the Nushagak River. He then returned to the States for the winter. The mission was formally opened in the summer of 1887 with the arrival of Rev. and Mrs. F. E. Wolff and Miss Mary Huber. To the original number have since been added Rev. J. H. Schoechert and Miss Emma Huber. Both of these schools have been assisted by the United States Bureau of Education.

On the 1st of July, 1886, an agreement was entered into between the Commissioner of Education and the Missionary Society of the Protestant Episcopal Church for the establishment of a school in the great Yukon Valley. Owing to the impossibility of getting the supplies into that inaccessible region the school was maintained for 1886-'87 at St. Michael, on the coast, by Rev. and Mrs. Octavius Parker.

In the summer of 1887 Rev. John H. Chapman was added to the mission and the station was removed to Anvik. The present force of teachers consists of Rev. John W. Chapman and Mr. Marcus O. Cherry.

In 1886-'87 the Roman Catholics entered the Yukon Valley, and have established missions and schools at Nulato, Kosoriffsky, and Cape Vancouver.

In 1886 the Evangelical Mission Union of Sweden established a station among the Eskimos at Unalaklik with Rev. Axel E. Karlson, missionary. He is now assisted by Mr. August Anderson, and it is proposed that next year the school will be assisted by the United States Bureau of Education.

The new stations among the Arctic Eskimos at Point Barrow, Point Hope, and Cape Prince of Wales, have already been mentioned. During the summer of 1890 I established three schools and missions in Arctic Alaska. One at Point Barrow, with Mr. Leander M. Stevenson, of Versailles, Ohio, in charge. This is, next to Upernavik, Greenland, the northernmost mission in the world. Its establishment was made possible through the liberality of Mrs. Elliott F. Shepard. Mr. Stevenson, who volunteered to go to that distant point, organize the mission and erect the necessary buildings, will return in the summer of 1892 to his family. A permanent missionary for that place is desired. He should be a young married man, and both his wife and himself should be of sound constitution and good bodily health. They should be of a cheerful disposition, "handy" with various kinds of tools and work, ready in resources, and possess good practical common sense. A consecrated Christian physician accustomed to evangelical work would be more useful than an ordained minister without the medical training. Applicants can address me at the United States Bureau of Education, Washington, D. C. They will not be expected to leave home until the spring of 1892. The Point Barrow Mission is under the auspices of the Presbyterian Board of Home Missions.

The second school in the Arctic is at Point Hope, and is under the supervision of the Protestant Episcopal Church. The teacher is Mr. John B. Driggs, M. D. The third is at Cape Prince of Wales, Bering Straits, with Messrs. H. R. Thornton and W. T. Lopp, teachers. It is under the control of the American Missionary Association of the Congregational Church.

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In the harbor at Unalaska, in September, 1890, lay at anchor the revenue cutters *Bear* and *Rush*. The *Bear* was soon to return to the northward and cruise around the Seal Islands; the *Rush* to arrest two men accused of murder, and convey them to the United States district court at Sitka. As the *Rush* was to call in at the principal villages en route, and would afford me an opportunity of inspecting the schools at Unga, Kadiak, Afognak, and Southeastern Alaska, Capt. W. C. Coulson kindly invited me to take passage with him. Accordingly on the 6th of September, I removed my quarters from the *Bear* to the *Rush*, taking with me the boys William and George Fredericks, and M. Healy Wolff. We were to have sailed at 3 p. m., on the 7th, but a southeast gale prevailing outside, the captain concluded to remain at anchor. It was nearly a week before the storm abated and we got started. After getting outside of the harbor the fog shut down so thick that the ship ran into the harbor of Akatan. This is a small village of 87 souls, 34 of whom are children, and greatly in need of a school. They live in the barabaras, or native sod houses. The Alaska Commercial Company have a small store at the place. The people are exceedingly poor; their whole catch for the past summer was 19 sea otters. This represents the moneyed support of the whole village for 12 months. In addition to the clothing and supplies which the otter skins procure them at the store, the bay yields them fish, which is their principal food. The next day we started out, but found the fog so dense that the ship again returned to anchorage. The second attempt was more successful, and we passed from Bering Sea into the North Pacific Ocean. Turning to the eastward, we steamed past the volcano of Shishaldin, its beautiful top covered with snow and its smoking crater alike hid in the clouds. On Sabbath we were abreast of Belkofski, at one time the richest village in Alaska. With the decline of the sea-otter trade its people are much impoverished. The population is about 250. This is one of the villages where a good school should be established as soon as the annual appropriation will justify it. Our stay at this place was just long enough for the surgeon to go ashore and visit the sick. That night we dropped anchor in Coal Harbor. Monday morning found us at Pirate Cove, a cod-fishing station of Lynd & Hough, of San Francisco. It was understood that a Mr. Clark, accused of murder, was there waiting to give himself up. Not finding him at that place we passed on to Sand Point, another fishing station, and from thence to Unga, where he was found. At Unga I made a thorough inspection of the school property and school supplies. The school was not in session, but a number of the children were brought together and examined. A meeting of the parents was also called and a general conference had with regard to school matters. Monday evening, with the prisoner and two witnesses on board, we sailed for Kadiak, which we reached early Wednesday morning. In company with Mr. Roscoe, the teacher, an inspection was made of the new schoolhouse, and many educational matters discussed and considered. During the forenoon, a pilot having been secured, the captain steamed over to Afognak, in order that I might visit that school also. The school being in session, an opportunity was afforded of seeing the good work done at that village by Mr. Duff, the teacher. A comfortable school building and teacher's residence had been erected during the summer. Returning to Kadiak, the evening was spent with friends. At Kadiak a creole accused of assault with intent to kill was taken on board, to be conveyed to Sitka for trial. His victim was taken along for medical treatment and as a witness.

Mr. M. L. Washburn, superintendent of the interests of the Alaska Commercial Company, gave me for the collection of the Alaska Society of Natural History an ancient Eskimo stone lamp that had been dug up on one of the islands. The traditions of the people are that 400 years ago their fathers came from Bering Sea and settled Kadiak Island, which they found uninhabited. The Eskimo settlements of the North Pacific coast extend from Nuchek Island on the east to Mitrofania Island on the west. On the trails between two settlements are frequently found at the highest point two heaps of stones, from 50 to 70 feet apart. These heaps are from 4 to 6 feet high, and were many years in building. Their purpose is not known. Every passer-by was expected to add a stone to the heap, but the custom of late years seems to have fallen into disuse.

There is a very pleasant custom connected with the stone heaps and stone lamp. A couple engaged to be married select a stone suitable for the manufacture of a lamp. This stone, with a flint chisel, is deposited at the foot of one of the stone heaps. Parties carrying loads or traveling from one city or another naturally sit down to rest at the stone heap at the top of the hill. Spying the stone, the traveler says to himself, "My hands may as well work while my feet rest. As some one worked my lamp, I will work for some one else." And picking up the flint, with a song, he chisels away at the stone. When he is rested,

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he lays down the stone and chisel and goes on his way. The next traveler repeats the operation, and the next, and the next, until in about two years the lamp is done which will last hundreds of years. Thus the whole community shows its good will to the young couple. In these lamps they burn seal oil, with a cotton wick. If the cotton can not be procured, then the wick is a bit of moss. In former days, as soon as one lamp was finished and removed, another stone was placed there, so that one was always in process of making. These lamps furnish both light and heat.

Early Thursday morning, September 17, the captain weighed anchor and put out to sea, bound for Sitka. During the day the wind increased to a gale, and on Friday night the sea was so rough that the ship was hove to, and oil was strained over the bows into the sea to lessen the force of the waves. Nearly the entire trip of a week across to Sitka was in the face of a heavy equinoctial storm. It was so rough that several times the table could not be set in the captain's cabin, and we took our meals in our hands in the pilot house as best we could. Off Mount Edgecombe, the ship was again compelled to heave to. However, we finally reached the quiet harbor of Sitka on Thursday, September 25, and the rough part of our journey was over. The remainder of our journey was made in the smooth waters of the Alexandrian Archipelago.

I remained two weeks at Sitka, attending to school matters. Then being joined there by the Hon. James Sheakley, superintendent of schools in the Sitka district, we made a tour of inspection through southeastern Alaska, visiting, either separately or together, every school in that district, except those at Metlakahtla and Klawack.

At Chilkat a location was selected and arrangements completed for the erection of a cheap but substantial log schoolhouse. On November 11 I reached Washington, after an absence of seven months, having traveled 17,825 miles.

The success of the long trip was greatly promoted by the many facilities that were extended by Capt. Michael A. Healy, of the steamer *Bear*, and Capt. W. C. Coulson, of the steamer *Rush*, with whom I sailed, also of the several officers of their command.

NEW OFFICERS.

In accordance with the provisions of the rules approved by the Secretary of the Interior April 9, 1890, the following persons have been appointed to commence service on July 1, 1890:

The members of the school committees will continue in office until June 30 of the year set against their names.

Assistant agent, William Hamilton; superintendent for Sitka district, Hon. James Sheakley.

LOCAL SCHOOL COMMITTEES.

Sitka.—Edward De Groff, 1892; N. K. Peckinpaugh, 1893; John C. Brady, 1894.

Juneau.—Karl Koehler, 1892; John G. Heid, 1893; Eugene S. Willard, 1894.

Douglas.—P. H. Fox, 1892; G. E. Shotter, 1893; S. R. Moon, 1894.

Fort Wrangel.—William G. Thomas, 1892; William Millmore, 1893; Allan Mackay, 1894.

Jackson.—James W. Young, 1892; W. Donald McLeod, 1893; G. Loomis Gould, 1894.

Metlakahtla.—David J. Leask, 1892; Dr. W. Bluett, 1893; William Duncan, 1894.

Kadiak.—Nicolai Kashavaroff, 1892; Henry Bowen, 1893: Charles Brown, 1894.

Unga.—Nehemiah Guttridge, 1892; John Caton, 1893; Edward Cashel, 1894.

Unalaska.—N. S. Reesoff, 1892; Nat. B. Anthony, 1893; Rudolph Neumann, 1894.

VISITORS.

Of late years tourists have commenced to learn of the attractiveness of the trip from Puget Sound to southeastern Alaska, and increasing numbers from year to year are availing themselves of it. This season over 5,000 round-trip tickets have been sold. As the steamer fare from Puget Sound up and return is $100, only the wealthier and better classes make the trip.

It is a cause for regret that the tourist season occurs during the vacation of the schools. If the tourists could see the schools in actual operation it would greatly assist in creating a healthy public sentiment that would react in favor of larger appropriations by Congress. As it is, the industrial school at Sitka, which is in continuous operation, is the only one visited. This, however, shows what can be done, and is an object lesson that will not be forgotten by tourists.

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One of them, after describing her visit to the homes of the natives and the sickening filth and squalor which she witnessed in Alaska, writes:

"And now, quite by accident, I had the most interesting experience of my whole trip, certainly one that has made an everlasting impression on my mind; an object lesson which often and often will set me thinking, a subject which would require a volume to do it approximate justice. The joyous shouting of half a hundred boys, some of them dashing across the road in pursuit of a football; well-clothed, well-fed boys; healthy, vigorous, intelligent boys; Indians, half-breeds, Muscovites, and a few Americans. What did it mean? From whence had they so suddenly come? From school. These were the beneficiaries of the Presbyterian Board of Home Missions, and the large building on the right of the road is the schoolhouse.

"Of course I had read about this mission. All the books on Alaska refer to it more or less. Yet the knowledge of its existence had brought no special desire to visit the place. To me Sitka was the vestige of a departed empire; the home of a decaying race of aborigines; a depot for the sale of Russi-Indian relics and curios; a pretty little town timidly hiding away in among the mountains, and for that I had come to see it and had been amply repaid. But the mission I had never thought of. Perhaps the book-writer had failed to attract me to it; perhaps my faith in missions generally was not very confirmed; perhaps I did not believe what I read about them. Be that as it may, hereafter no man, nor woman either, shall outdo me in words of praise and thanks for the glorious, godlike work which is being performed by the good people who are rescuing the lives, the bodies, and the souls of these poor creatures from the physical and moral deaths they are dying. I am not a Christian woman; my faith is that of a chosen people who were led out of Egyptian tyranny and darkness by the pillar of fire and the pillar of cloud; but my whole nature is in accord with these Christian men and women, whose immolation and sacrifices to regenerate their fellow-creatures will surely meet with heavenly reward, no matter what their creed. I wish I had had more time at my disposal to spend with the teachers and the scholars, so that I might now give even a skeleton outline of their daily life.

"There are about 100 boys and 50 girls in the institution, some of them being only 3 years of age and others as old as 22. The boys are instructed in carpentry, shoemaking, and blacksmithing; the girls are taught dressmaking and the use of the sewing machine. I went first into one of the class rooms, where I saw perhaps 20 dark-skinned Siwash Indian boys, whose Mongolian faces and almond-shaped eyes had assumed an expression of intelligence so different from the stupid, blear-eyed appearance of the same age and race whom I had seen in the rancherie that it was difficult to realize that they could possibly be twigs of the same tree. Upstairs we found the dormitories, like everything else about the establishment, orderly, neat, clean, due regard being paid to the number allotted to each room and to the subject of heating and ventilation. In the sewing department were several girls operating skillfully upon the sewing machine, others cutting from the piece, and younger ones basting for the sewing girls.

"It is said somewhere that it is only a single step from civilization to barbarism. Perhaps so; but I, and those ladies and gentlemen who accompanied me through the rancherie and the schools at Sitka, can vouch for the fact that it is only half a mile from savage, uncivilized ignorance, superstitution, filth, and immorality to education, deportment, thrift, domestic felicity, and all human happiness."

NEW BOOKS.

The growth of the public interest in Alaska is manifested by the number of books which are issuing from the press.

Since the list given in my report for June 30, 1888, the following books have come under my observation:

"Fifth Avenue to Alaska," by Edwards Pierrepont, B. A. Published by G. P. Putnam's Sons. New York, 1884. Maps and illustrations. 329 pages. Price, $1.75.

"Letters from Alaska," by Horace Briggs, PH. D. Published by Mrs. Dora B. North, 51 Park Place, Buffalo, N. Y., 1889. 87 pages. Paper cover. Price, $1.

"Cruise of the *Rush*, 1889," by Isabel S. Shepard. Published by The Bancroft Company, San Francisco, 1889. Maps and illustrations. 257 pages. Price, $1.50.

"Picturesque Alaska," by Abby Johnson Woodman. Introduction by Whittier. Published by Houghton, Mifflin & Co., Boston. Maps and illustrations. 212 pages. Price, $1.50.

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"New Eldorado," by Mr. M. Ballou. Published by Houghton, Mifflin & Co., Boston, 1889. Price, $1.50.

"The Wonders of Alaska," by Alexander Badlam. Published by the Bancroft Publishing Company, San Francisco, 1890. Maps and illustrations. 151 pages. Price, $1.50.

"Pacific Coast Scenic Tour," by Henry T. Finck. Maps and illustrations. Published by Charles Scribner's Sons, New York, 1890. 309 pages.

"A Woman's Trip to Alaska," by Mrs. Septima M. Collis. Published by The Cassel Publishing Company, New York, 1890. Maps and illustrations. Heavy paper. 194 pages. Price, $2.50.

"Arctic Alaska and Siberia," by Herbert L. Aldrich. Maps and illustrations. Published by Rand, McNally & Co., Chicago, 1889. 234 pages. Price, $1.50.

"Thirteen Years of Travel and Exploration in Alaska," by W. H. Pierce. Published by J. H. Carruth, No. 1312 Ohio street, Lawrence, Kans., 1890. 224 pages. Illustrated. Paper, 60 cents. Cloth, $1.

"From Yellowstone Park to Alaska," by Francis C. Sessions, president of the Ohio Historical and Archæological Society. Published by Welch, Fracker & Co., New York, 1890. 186 pages. Price $1.50.

"Reconnoisance in Alaska, 1885," by Lieut. Henry T. Allen, U. S. A. Maps and illustrations. 172 pages. Government Printing Office, Washington, 1887.

"Contributions to Natural History of Alaska," by L. M. Turner. 1866. 226 pages. Illustrated. Government Printing Office. Washington, 1886.

"Report on Natural History Collections made in Alaska, 1877-'81," by E. W. Nelson. Illustrated. 337 pages. Government Printing Office. Washington, 1887.

"Fur Seal and other Fisheries of Alaska." Maps and illustrations. 324 pages. Government Printing Office. Washington, 1889.

"The Coast Indians of Southern Alaska," by Ensign Albert P. Niblack, U. S. Navy. Maps and illustrations. 158 pages. Published by the Smithsonian Institution, National Museum. Government Printing Office. Washington, 1890.

"Cruise of the Revenue Marine Steamer *Corwin* in the Arctic Ocean, 1884." Maps and illustrations. 128 pages. Government Printing Office. Washington, 1889.

"Cruise of the Revenue Marine Steamer *Corwin* in the Arctic Ocean, 1885." Maps and illustrations. 202 pages. Government Printing Office. Washington, 1887.

"Bean's Report on the Salmon Fisheries of Alaska." Maps and illustrations. Government Printing Office. Washington, 1890.

From Yellowstone Park to Alaska, by Francis C. Sessions. 8vo. 196 pages. Illustrated. Published by Welch, Fracker & Co. New York, 1890.

"California and Alaska," by William S. Webb, M. D. Quarto, 190 pages. Vellum paper. Illustrations, India proof etchings, and photogravures. Price, $25; popular edition of the same, $2.50. Published by G. P. Putnam's Sons. New York, 1891.

"Alaskana. The Legends of Alaska," in verse, by Prof. Bushrod W. James. Illustrated. 368 pages. Published by Porter & Coates. Philadelphia, 1892. Price, $2.

"Kin-da-Shon's Wife. A Story of Native Customs Among the Chilkats of Alaska," by Mrs. Eugene S. Willard. Illustrated. 281 pages. Published by Fleming H. Revell. New York and Chicago.

RECOMMENDATIONS.

The three most urgent needs of education in Alaska at present are:

FIRST—LARGER APPROPRIATIONS.

Fifty thousand dollars is a sum wholly inadequate for the establishing and maintaining of good schools for the 10,000 children of Alaska. The utmost care is taken to make it go as far as possible, and yet a number of communities are asking for schools, which can not be granted because of the insufficiency of the appropriation. I would most respectfully recommend that an appropriation of $75,000 be asked for the coming year.

The efficiency of the school service would be greatly increased if a permanent appropriation could be made for a term of five years, which would increase in regular amounts up to $100,000. This would enable the Bureau of Education to keep pace with the steady growth of the work. It would also enable the Commissioner of Education to more wisely plan his work.

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The appropriation for education in Alaska is placed in the sundry civil bill. Every alternate year during the long session of Congress this bill is not enacted into law before July, August, or September. But the last vessel for the year that communicates with the teachers in northwestern Alaska leaves San Francisco about the 1st of June. Consequently the Commissioner of Education can not appoint teachers for that section until ten or twelve months of the school year have expired. Or, in other words, the teachers are compelled to teach the entire school year without knowing whether any appropriation has been made to pay them. This is an injustice to the Commissioner of Education and to the teachers.

SECOND—OBLIGATORY ATTENDANCE.

There is no one subject connected with the Alaska schools that teachers, superintendents, committeemen, and citizens are more united upon than that the highest interests of the children and the schools require that there should be some authoritative regulations that will secure the more regular attendance of the native children. Attention has been called to this in every annual report.

Mr. John H. Keatley, ex-judge of the United States district court of Alaska and ex-member of the Territorial board of education for Alaska, in an article in the Atlantic Monthly for August, 1890, on "The Race Problem in Alaska," says:

"The natives of Alaska realize that everything is changing about them, and are anxious to pattern after the whites in better dwellings, more comfortable clothing, and a greater diversity of food, but they fail to realize yet the importance of education. The adults are serious obstacles to the education of the children, and no radical change is possible until attendance at the Government schools is compulsory. It is not enough to provide schools and teachers at the public expense, but Congress must go further and authorize the employment of Indian policemen at every village to compel the attendance of the children.

"Some of the native schools have an enrollment of 60 pupils,[1] with an average daily attendance of 10. This is due to the total lack of means of enforcing attendance. The race problem presented in the subject of their education and possible participation in the political affairs of the country is of too serious a character to be thus ignored by those who are now responsible for their future development."

THIRD—AGRICULTURAL EXPERIMENT STATION.

Passing from northern Alaska, with its adaptation to reindeer-raising, we find the whole southern coast, stretching for thousands of miles, to possess a temperate climate. This is due to the "Kuro-siwo" or "Japan Current" of the Pacific Ocean. In this "temperate belt" it is probable that there are areas of greater or less extent that are adapted to agriculture. At least it is known that there are small farms or vegetable gardens on Kadiak and Afognak Islands, on the shores of Cook's Inlet, and in southeastern Alaska. It is also known that wild berries grow in great profusion and abundance in many sections. But no intelligent and continued experiments have been made to test the agricultural and horticultural capabilities of the country.

Until a quite recent period (1867) the European population were fur-trading Russians. They were followed by fur-trading Americans, and more recently by the gold-seekers. No one expected to remain long in the country, and there has been no incentive to carry forward intelligent experiments in agriculture.

As early as my first report to the Commissioner of Education (1885) I called attention to the fact that there was a very wide diversity of views concerning the agricultural and horticultural capabilities of Alaska, and necessarily very great ignorance; that no systematic effort intelligently prosecuted had ever been made to ascertain what could or what could not be raised to advantage; that it was of very great importance, both to the people of Alaska and the country at large, that careful experiments should be made, extending over a term of years, to ascertain the vegetables, grains, grasses, berries, apples, plums, trees, flowers, etc., best adapted to the country; the best methods of cultivating, gathering, and curing the same; the planting and grafting of fruit trees; the development of the wild cranberry; cattle, hog, and poultry raising; butter and cheese-making, etc. In 1886 my recommendation was taken up by the U. S. Commissioner of Agriculture, who, in his annual report for that year (page 20) says: "Something in the line of experimental work might also be undertaken

[1] This is true of a few, not of many schools.

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in Alaska, possibly with profit. It is well known that the Department of the Interior has established an agency for the promotion of education in that territory."

"It has been suggested that a line of experiments, to be undertaken by this Department, would easily prove whatever of agricultural and horticultural capability may exist in the Territory. No careful attention seems to have been given there, as yet, to this branch of industry, and the resources of the country are quite unknown and undeveloped.

"The industrial training school at Sitka would furnish an admirable basis for a station, where could be conducted careful experiments to ascertain the agricultural products best adapted to the climate and soil of the Territory, and what breeds of cattle and other domestic animals are most suited to its climate and soil.

"Such an experiment ought to extend over a series of years, and the result would amply repay any expenditure that Congress may choose to make in this direction."

In view, therefore, of the national importance of introducing the domesticated reindeer of Siberia into northern Alaska, and testing the agricultural capacity of southern Alaska, I most earnestly recommend that you secure the establishment of an "agricultural school and experiment station" in connection with the system of industrial education in Alaska.

By an act approved July 2, 1862, Congress made provision for schools for the "benefit of agriculture and the mechanic arts." By an act approved March 2, 1887, provision was made for "agricultural experiment stations" in connection with the agricultural schools. And by the act approved August 30, 1890, certain of the proceeds of the sale of public lands were set aside for the better support of these agricultural schools.

These acts of Congress require the assent of the legislature of the State or Territory in order that their provisions may become available.

But Alaska has no legislature, and is governed directly by Congress. On this account, and partly because nineteen-twentieths of the children to be benefited belong to the native races, Congress has committed to the Secretary of the Interior the duty of making "needful and proper provision for education in Alaska." I would therefore recommend that an application be made to Congress to direct the Secretary of the Interior to extend to Alaska the benefits of the agricultural acts of 1887 and 1890, and secure the establishment of a school that can introduce reindeer into that region, and teach their management, care, and propagation, and also to conduct a series of experiments to determine the agricultural capabilities of the country.

To reclaim and make valuable vast areas of land otherwise worthless; to introduce large, permanent, and wealth-producing industries where none previously existed; to take a barbarian people on the verge of starvation and lift them up to a comfortable self-support and civilization, is certainly a work of national importance.

In the closing year of the existence of the Territorial board of education the following rules were enacted, viz:

First. From and after this date (October 27, 1888), corporal punishment in the public schools of Alaska is entirely and wholly prohibited.

Second. All religious services are prohibited in all the public schools of Alaska except Howkan Klawack, Metlakahtla, Fort Wrangell, Juneau No. 2, and Haines.

The above rules were carried by the deciding vote of the chairman. If Mr. Duncan, the absent member of the board had been present, they could not have been passed.

With the reorganization of the Alaska school system on April 9, 1890, the above rules were rescinded, and both school punishments and religious exercises left discretionary with the teacher and the local school committee.

To still further popularize the schools and create in the several communities a feeling of responsibility for the conduct of the schools and a personal interest in their success, I would recommend that in the villages containing a number of white people, such as Juneau, Sitka, and Douglas, the voters be allowed to elect their local school committee, and said committee be authorized to select teachers of the white schools, subject to the approval of the Commissioner of Education.

I remain with great respect, yours, truly,

SHELDON JACKSON,
General Agent of Education for Alaska.

Hon. W. T. HARRIS, LL. D.,
Commissioner of Education.

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CHAPTER XVIII.

EDUCATIONAL NECROLOGY.[1]

1887.

ELIOT, W. G., D. D., at Pass Christian, Miss., January 23, aged seventy-five; was born in Massachusetts, descended from the same family as President C. W. Eliot of Harvard; graduated at Columbian University, Washington, D. C., and at Harvard Divinity School; during his long pastorate of the Unitarian Church in St. Louis, he was one of the most effective promoters of the social, intellectual, and moral uplift of his city and State. He was specially active in establishing Washington University, and finally became its chancellor.

1888.

CALLAHAN, Henry, died at Franklin, N. Y., February 7, aged seventy-seven; born in Andover, Mass., graduated at Union College 1836; studied at Andover Theological Seminary 1836-40, taught in New Hampshire, pastor in New York, and became chaplain of the One hundred and fourteenth New York Volunteers, and was on duty in hospital in New Orleans; taught two years in Delaware Institute, Franklin, N. Y., conducted Callahan Institute there for fourteen years.

WADLEIGH, Miss Lydia F., October 27, in Brooklyn, N. Y., aged seventy-one. She was born in Sutton, N. H., educated and taught at New Hampton, Hanover, Derry, Concord, Georgetown, D. C., Philadelphia, Pa., and Freehold, N. J.; in 1856 became principal of the senior department of the Girls' Twelfth Street Grammar School, New York City; here she advanced the course, won the girls to larger study, at her own expense provided text-books and diplomas, and in spite of criticism inaugurated annual commencements, prepared the public to demand and establish the Normal College, of which she became vice-president and professor of ethics in 1871, and so remained until her death, which occurred on her return from a visit to Europe.

1889.

ABBOTT, Amos, M. D., in England April 24, aged seventy-eight; born in New Hampshire; educated at Phillips Andover and Andover Theological Seminary, and in medicine in Philadelphia; missionary in India, 1834-47 and 1857-69; author of mission text-books; his arithmetics have been used forty years.

BRACE, Chas. Loring, in Germany, August 17, aged sixty-three; was born in Connecticut; graduated at Yale in 1846; studied theology there and at Union Theological Seminary; he went to Europe for study and observation; while in Hungary he was arrested for expressions of sympathy with the Patriot cause, and was only released on appeal of the American minister and the arrival at Trieste of two American frigates; returning, became interested in an effort to reduce the misery at Five Points, New York City, but declared it as he saw it a Sisyphus' work; began to form the plans which resulted in the Children's Aid Society in 1853, in which he sought to arrest degradation at its source in

[1] Often the information furnished the Office comes too late for insertion in the current report. Most of the persons named were correspondents of this Bureau.

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childhood. Some of the wisest philanthropists joined him, and he found his life work. Boys and girls in need were taken in, and an effort made to elevate them. Lodging houses, newsboys' homes, night schools, free reading rooms, fresh air fund, and summer resorts were established. In his last report it appears that over 200,000 had been received at the lodging houses, over 70,000 had been transplanted to country homes, and not a few had risen to places of responsibility. The expenditure for that year reached $366,998.26. He was a correspondent of this Bureau and the Commissioner appealed to him to plant similar organizations in all of our large cities, but he did not see his way to the undertaking.

BRIGHAM, Miss Mary A., in a railroad accident at New Haven, June 29, aged fifty-nine years; born in Massachusetts, graduated and taught at Mount Holyoke Seminary; was principal of Ingham University, Leroy, N. Y., in 1863; assistant principal of Brooklyn Heights Seminary; was offered the presidency of Wellesley, but accepted that of Mount Holyoke, whose charter as a college she had been active in securing.

BURNHAM, Jonas, March 9, aged ninety years; born in Maine; educated at Phillips Andover, and Bowdoin College, 1823; teacher of academies at Saco, North Bridgton, Bath, China, Bridgton, Kennebunk, Hallowell, Augusta, Winthrop, Strong, and Farmington, Me.

CANFIELD, Mrs. S. A. Martha, May 11, at Bristol, R. I. Her husband, a lieutenant-colonel, fell at Shiloh, and she devoted herself to the relief of the sick and wounded soldiers. She founded the colored orphan asylum at Memphis, Tenn. On the suggestion of President Grant she became a clerk in the Bureau of Education in 1873 and so remained until she resigned in 1885, giving special attention to child-saving institutions and the industrial education of girls.

COOKE, George, in Florida, March 10, aged seventy-eight; born in New Hampshire; graduated at Dartmouth, 1832; studied theology at Andover; president University of Tennessee at Knoxville, 1852-59; teacher at Amherst, 1859-63.

FAIRCHILD, Edward H., in Berea, Ky., October 2, aged seventy-three; born in Massachusetts; graduated at Oberlin; principal of preparatory department, Oberlin, 1853-69; president of Berea College, Kentucky, from 1869 till his death; was a brother of President Fairchild of Oberlin and of President Fairchild of Manhattan College, Kansas.

GAGE, William L., May 31, aged fifty-seven; born in New Hampshire; educated at Phillips Andover Academy and at Harvard (1833) and abroad; lectured before Lowell Institute; editor of Ritter's Geographical Studies, Ritter's Life, Ritter's Lectures on Geography, and a Historical Atlas, also of relief maps; author of some twenty other publications.

HALL, J. D., February 16, aged seventy; was born in Connecticut; graduated at Yale 1837, and in theology in 1842; was teacher at Hartford, Conn., 1859-64; principal of the Murray Hill Institute, New York City, 1864-81; teacher at West Hartford, Conn., 1881-84.

HIGBEE, Elnathan Elisha, D. D., LL. D., December 13, aged fifty-nine; born in Vermont; graduated at University of Vermont; taught in Woodstock Academy, Vermont, in 1849; accepted position of teacher in Emmetsburg, Md.; graduated at Reformed Theological Seminary, Mercersburg, Pa.; was one year teacher of mathematics in the high school, Lancaster, Pa.; was professor of Latin and Greek in Heidelberg College, at Tiffin, Ohio; in 1864 accepted the professorship of Church History and New Testament Exegesis in Mercersburg Theological Seminary; 1871-90 was president of Mercersburg College, which he had been instrumental in founding; in 1881 he became State superintendent of public schools for Pennsylvania, and so remained until his death.

HOSFORD, H. B., February 27, in Illinois, aged seventy-one; born in Williamstown, Mass.; graduated at Williams, 1843; principal Hopkins Academy, Hadley, Mass., 1843-44; tutor at Williams College, 1844-48; professor Western Reserve College, 1854-60.

KENDRICK, John, LL. D., at Marietta, Ohio, July 29, aged eighty-six; born in Lebanon, N. H.; graduated at Dartmouth in 1826, first in a class of which Chief Justice S. P. Chase was a member; professor at Kenyon, intellectual and moral philosophy, rhetoric, logic and history, also of Greek language and

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literature, 1829–40; professor at Marietta College, 1840, rhetoric and political economy, Latin and Greek languages, and emeritus until his death; his brother, Col. Kendrick, was professor at West Point; his son is bishop of New Mexico and Arizona.

LOSSING, Benson J., at Chestnut Ridge, N. Y., June 3, aged seventy-six; from watchmaker he became editor; he made himself proficient with the pencil and was one of the first wood engravers in America; was specially known for his illustrated historical writings.

LOOMIS, Elias, LL. D., died at New Haven, Conn., August 15, aged seventy-eight; born in Connecticut; graduated at Yale 1830; teacher in Maryland and student at Andover Theological Seminary, 1830–33; tutor at Yale, 1833–36; professor Western Reserve College and student abroad, 1836–44; professor University of the City of New York, 1844–48, 1849–60; professor Princeton, 1848–49; professor at Yale 1860 until death.

MITCHELL, Miss Maria, LL. D., at Lynn, Mass., June 28, aged seventy-one; born in Nantucket, Mass.; was daughter of William Mitchell; acquired her education under her father, who was an astronomer, and became an assistant in the school of Chas. Pierce, Nantucket; received a gold medal from the King of Denmark and one in copper from the Republic of San Marino, Italy, for the discovery of a comet (1847); was employed on the Nautical Almanac for many years; in 1865 was called to the professorship of astronomy in Vassar College; was the first woman elected to the American Academy of Arts and Sciences.

MORLEY, L. B., at Pittsfield, Mass., aged eighty-five; was principal of Winsted Academy 1829–31, and of Springfield High School 1834–36. Prof. Edward W. Morley, of Western Reserve College, is his son.

PATTON, William Weston, D. D., LL. D., December 31, at Winsted, N. Y., aged sixty-eight; was born in New York City; graduated at University of New York 1839, and Union Theological Seminary 1842; and became editor of the Advance 1867–72; western secretary of A. M. A. 1873–74; lecturer Chicago and Oberlin theological seminaries 1874–77; president of Howard University 1877–89; was pastor in Connecticut, Massachusetts, and Illinois; his separate publications number thirty-seven.

PERRY, S. Joseph, S. J., F. R. S., December —, a distinguished astronomer.

PETTIBONE, Ira, June 11, Winchester, Conn., aged eighty-seven; graduated at Middlebury College 1828; teacher at Utica, N. Y., 1845–46, and at Cornwall, Conn., 1853–57.

ROBBINS, Elijah, June 30, aged sixty-one; born in Connecticut; graduated at Yale 1856, and at Hartford Theological Seminary in 1859; Missionary A. B. C. F. M. among the Zulus, teacher of Umzumbi school till 1872, when he returned to America and was principal of school at Adams from 1874 until his death.

SHAW, Henry, St. Louis, August 25, aged eighty-nine; born in England, received his primary education at Thorne; spent six years at Mill Hill, a dissenting school 20 miles from London. He was noted for his readiness in mathematics; came to Canada with his father in 1818; landed at St. Louis May 3, 1819, with a small stock of cutlery; he accumulated wealth rapidly and early retired from active business. In 1851 he attended the World's Fair in London, and while walking through the grounds of Chatsworth, the most magnificent private residence in Europe, he exclaimed, "Why can not I have a garden, too." From that on his ideas took shape, and St. Louis has the result in the Shaw botanical garden, richly endowed, and the Shaw school of botany, with an annual income of $5,000 from improved real estate. To the preparation and completion of these plans he devoted the last forty years of his life.

SOUTHWORTH, Alden, February 7, in Connecticut; was born in Vermont; graduated at Dartmouth 1840, at Bangor Theological Seminary 1843; was teacher at Woodstock, Conn., 1845–46, at Nicholas Academy, Dudley, Mass., 1846–49 and 1853–54, and in California 1849–53.

STEBBINS, M. C., September 12, Cornwall, Vt., aged sixty-one; graduated at Amherst, 1852; teacher in New Hampshire, 1851–52; principal of High School, Springfield, Mass., 1865–74; principal Collegiate Institute, 1874–81; instructor at Middlebury College, 1884.

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THOMPSON, Wm., D. D., February 27, aged eighty-three; was born in Connecticut; graduated at Union College 1827, Andover Theological Seminary 1832: was Nettleton professor of Hebrew language and literature in (E. W.) the present Hartford Theological Seminary 1834-81; emeritus and dean of faculty until his death. Pros. Chas. O. Thompson, PH. D., first principal of Institute of Technology at Worcester, Mass., and of Rose Polytechnic Institute at Terre Haute, Ind., was his son.

VAIL, W. K., June 18, in Pelham, Mass., aged seventy-four, was born in Massachusetts; graduated at Amherst in 1833; was teacher at Chicopee 1842–46; at Pickering school, Salem, 1849–54; and teacher and chaplain 1854–66; was superintendent of schools at Shutesbury 1867-69; and Pelham 1876–77.

WARD, Joseph, D. D., December 11, aged fifty-one, was born in New York: graduated at Brown University; settled in Yankton 1869; was a member of constitutional convention of South Dakota; was founder of Yankton College, and president from 1883 until his death.

WOOLSEY, Theo. Dwight, D. D., LL. D., July 1, in New Haven, aged eighty-seven: was born in New York City, graduated at Yale 1820; was at Princeton Theological Seminary 1821-23; tutor at Yale 1823-25; student in Europe in 1827-30; president of Yale 1846-71. Thirty-six separate publications are enumerated, among them five Greek text-books, and study of international law which has reached five editions.

1890.

ALLEN, Dr. J. A., August 15, at Chicago; was born at Middlebury, Vt.; graduated from Middlebury College in 1845, received the degree of M. D. in 1846; was president of Rush Medical College and afterward its dean.

ATKINSON, George H., D. D., at Portland, Oregon, February 25, aged sixty-nine; was born in Massachusetts; graduated at Dartmouth 1843, at Andover Theological Seminary 1846; went to Oregon 1848 by sailing vessel via Cape Horn and Hawaiian Islands; pastor at Salem and Portland, and general Congregationalist missionary 1872 for Oregon and Washington until his death; was wise in the establishment of schools and churches; founder of Forest Grove University and Whitman College; was special correspondent of the Bureau of Education; gave it information of Alaska before Dr. Sheldon Jackson's efforts began; by request gave shape to the first gubernatorial message of the governor of the Territory upon education, and also to the educational clause of the constitution of the State.

ATKINSON, Wm. P., in Boston; emeritus professor of English and of history, Institute of Technology.

BARROWS, Simon, January 12, aged seventy-eight years; graduated at Dartmouth; principal of Des Moines Academy 1862–64; trustee of Gates College and curator of cabinet.

BISHOP, Robert H., July 5; professor of Latin at Miami University, Oxford, Ohio, 1852-73; professor emeritus and secretary board of trustees until his death, and trustee Lane Theological Seminary.

BIZZEL, W. D., M. D., at Norcross, Ga., June 30, aged forty years; was born in Alabama; graduated from Alabama Medical College; went to Atlanta in 1881, and at the time of his death was professor in the Atlanta Medical College.

BURLEIGH, Dr. Joseph, in almshouse, Baltimore, December 23. He was known as the founder of the Newton University, Baltimore.

BUTLER, Calvin, June 11, aged eighty years; graduated Dartmouth College 1834, and at Andover Theological Seminary 1837; was principal of Washington Academy, Salem, 1848-51; principal of the academy at New Saltz 1848-51; principal of Young Ladies' Seminary, Somerville, N. J., 1851-62; of Somerset Classical Institute 1863-64.

COLLIER, Robert Laird, Unitarian divine, author and lecturer, July 27, aged fifty-three.

COWLES, J. P., Ipswick, Mass., March 11, aged eighty-five years; was born in Colebrook, Conn.; graduated from Yale 1826, and Andover Theological Seminary 1829; was professor of language and literature of the Old Testament at Oberlin 1836-39; principal of Elyria Academy 1840-44; principal of Young Ladies' Seminary, Ipswich, Mass., 1844-74.

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CUMMINGS, Francis J., M. A., S. J., in Brooklyn, August 6, aged thirty-two; was principal of schools 1871. He had previously served as professor in Loyola College, Baltimore; also at St. Marys Institute, Amsterdam, N. Y., and Seton Hall College, Orange, N. J.

CUMMINGS, Joseph, D.D., LL. D., at Evanston, Ill., May 7, 1890; aged seventy-three; was graduated from the Wesleyan University, Connecticut; was president successively of Genesee College, New York, of Wesleyan University, Middletown, Conn., and of the Northwestern University, 1881, Evanston, Ill., which place he held at the time of his death.

DAY, Henry Noble, LL. D., at New Haven, Conn., January 12; aged eighty-one years; was born in Washington, Conn., graduated from Yale College 1828, and from the theological school in 1834; was teacher at New Burlington, N. J., 1828–30; was tutor at Yale 1831–34; professor of rhetoric, Western Reserve College 1840–44, professor of practical theology 1844–58; was president of Ohio Female College, Cincinnati, 1858–64; was the author of a number of text-books and treatises on educational subjects.

DWINELL, Israel Edson, D. D., at Oakland, Cal., June 7, aged sixty-nine years; was born at Calais, Vt.; graduated at Vermont University 1843, from the Union Theological Seminary 1848; was professor of Homiletic and Pastoral Theology and New Testament Greek at Pacific Theological Seminary, Oakland. He published a few books.

FANNING, John H., in New York City, June 26, aged sixty-nine; was the oldest public school official in the city. In 1847 he was made principal of Madison street school, and in 1852 assistant principal of Female Normal School; in 1869, assistant superintendent public instruction, which place he held until his death.

FOLSOM, N. S., D. D., in Asheville, N. C., November 10, aged eighty-four years; was born in Portsmouth, N. H.; graduated at Dartmouth College 1828 and Andover Theological Seminary in 1831; was professor of language Lane Seminary 1833; professor of Biblical literature in Western Reserve College 1834–36; editor of Christian Register 1847–49; professor of Biblical literature in Theological Seminary, Meadville, Pa., 1849–61.

GOODWIN, Miss Abby Moore, at Poughkeepsie, N. Y., April 24. For seventeen years she was instructor in Vassar.

GOODWIN, Daniel R., ex-provost University of Pennsylvania, March 15, aged seventy-nine.

HASTINGS, Eurotas Parmelee, D. D., in Ceylon July 31, aged sixty-nine years. Born in New York; graduated at Hamilton College, 1842, and Union Theological Seminary, 1846; was president of Jaffna College, Ceylon.

HEDGE, Frederick Henry, D. D., LL. D., August 21, aged eighty-four years; was born in Cambridge, Mass.; studied in Germany; graduated at Harvard and Cambridge Divinity School; in 1857 was made professor of ecclesiastical history in Harvard and in 1872 professor of the German language. Besides magazine contributions and German translations he wrote Reason in Religion and The Primeval World of Hebrew Tradition.

HILL, Franklin C., D. L., PH. D., at Princeton, N. J., November 4, aged sixty-three years; a noted scientist and scholar. He was a nephew of ex-President Hill of Harvard, and graduated from Harvard school of science; was professor in Antioch College, Ohio, and curator of the Princeton museum, where he remained until his death.

HOBART, Leander Smith, at Springfield, Mass., March 8, aged seventy-five years. Member of Board of Visitors, Michigan University.

HOYT, James S., D. D., at Keokuk, Iowa, March 6, aged fifty-nine years; graduated at Yale, 1851, and at Andover Theological Seminary, 1858. Principal of Academy at Niagara Falls, N. Y., 1851–53; trustee and treasurer of Olivet College; trustee Iowa College: visitor Chicago Theological Seminary.

HOWARD, Virgil Maro, at Deerfield, Mass., September 30, aged fifty-seven; was born in Ware, Mass.; graduated Yale 1851; taught in New Salem and Barre Academies; for fifteen years principal of Academy, Deerfield; superintendent of schools, Athol; was called to Deerfield to settle estate of Mrs. Esther Dickinson, who bequeathed a large sum for founding a school.

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KIDDLE, Henry, September, aged sixty-seven years; was born in England; was principal of several normal schools at different times; from 1856 to 1870 was deputy superintendent of city schools, and in 1870 was made superintendent; in 1879 he resigned, owing to an adverse public sentiment created by the avowal of his belief in Spiritualism; in 1877, with Alex Schem, he edited the Cyclopedia of Education.

LAMB, Edward, at Waterville, N. Y., August 19; aged sixty-seven; was teacher in the Cherry Valley High School, and served on the board of education for some years.

LAMBERT, William H., PH. D., at Fall River, Mass., November 4; born in Maine; graduated at Waterville College, now Colby University, in 1874; was made principal of Fall River High School in 1879; was superintendent of schools at Malden, Mass.; in 1885 returned to his former position in Fall River.

LANE, Daniel, D. D., at Freeport, Me., April 3; aged seventy-seven; was born in Maine; graduated at Bowdoin College and Andover Theological Seminary; principal of preparatory department Iowa College 1853–55; professor of moral philosophy and metaphysics there in 1855–58; financial agent for Iowa College in 1872–78.

LEIGH, Dr. Edwin, in Texas, April 9, aged seventy-three years; was born in Maine; graduated at Bowdoin in 1835 and at Andover Theological Seminary in 1838. Ill health prevented his preaching, and he studied and received M. D. at Harvard; assisted Louis Agassiz two years; was seven years connected with the St. Louis public schools, during which he issued his "Pronouncing Orthography," a phonetic system to improve primary instruction in reading, and to facilitate the acquisition of English by foreigners, to which he devoted the remainder of his life, and which was heartily commended by Dr. W. T. Harris and Dr. J. D. Philbrick and Hon. J. O. Wilson. For this purpose he prepared editions of elementary text-books. He also published Philosophy of Medical Science, Boylston Prize Essay, and other works. He made an elaborate computation of illiteracy in the United States, as shown by the census, which was printed in the Commissioner's special report by Dr. Barnard, 1870; also in the Annual Report, in which intelligence and illiteracy were presented to the eye in dotted squares as well as figures. This was the first effort among us to treat this subject graphically.

LIPSCOMBE, A. A., D. D., in Athens, Ga., November 25; prominent Southern Methodist educator. Prior to the late war he was pastor of the Methodist Church at Montgomery, Ala. After the war he held successfully the positions of chancellor and professor in Vanderbilt University, and was literary editor of Harper's Magazine.

LYMAN, Chester S., in New Haven, January 29, aged seventy-six years; graduated at Yale and the Theological Seminary. Professor of mechanics and physics, Sheffield Scientific School, Yale.

MCAFEE, John A., D. D., organizer and first president of Park College, died June 12, aged fifty-nine. He was born in Missouri, and was for some time connected with Highland University.

MCELROY, John E. R., at Philadelphia, November 26; was professor of rhetoric and English at the University of Pennsylvania.

MANGUM, Adolphus Williamson, D. D., at Chapel Hill, N. C., May 12, aged fifty-six years; was born in North Carolina; educated at South Lowell Academy, and at Randolph Macon College, Virginia, entered the ministry in 1875; was appointed to the chair of mental and moral science in the University of North Carolina, which he held until his death.

MATHER, Prof. Richard H., LL. D., at Amherst, Mass., April 16, aged fifty-five. He graduated at Amherst in 1857; also studied in Berlin; taught a year in Williston Seminary; became tutor at Amherst in 1859, where he taught Greek thirty-one years, three years as instructor, six as adjunct professor, and twenty-two as professor. He also taught German and became lecturer upon Sculpture. He was a favorite preacher in many pulpits. He was specially efficient in securing funds for the college, and was the chief promoter of the art museum which may fitly be called the Mather collection. His several visits abroad were made specially tributary to the college. Prof. Mather of Williston Seminary is his son.

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MONTEITH, James, in Brooklyn, September 11, aged sixty years; a well-known geographical writer and editor of atlases.

MORISON, Nathaniel Holmes, in Baltimore, Md., November. He graduated at Harvard 1839; was provost of Peabody Institute.

NOBLE, Edward Wolcott, D. D., at North Cambridge, February 4, aged seventy-eight years; graduated at Williams College 1831 and Andover Theological Seminary; teacher at Amoskeag, N. H.

NOYES, Edward Follansbee, LL. D., died Cincinnati, August, 1890; born in New Hampshire; graduated at Dartmouth College 1857; was lawyer, judge, colonel Thirty-ninth Ohio Volunteer Infantry, brigade-general, Governor of Ohio, minister to France, and correspondent of the Bureau of Education.

PALLEN, Montrose Anderson, M. D., in New York, October, aged ninety; was born in Vicksburg, Miss.; was medical director in the Confederate army; served with France in the Franco-Prussian war; in 1874 was appointed to the chair gynecology in the University of the City of New York, where he assisted in forming the post-graduate college, was called in consultation with Sir Morrell Mackenzie to the Emperor Frederick III; he was the first physician to use the ophthalmoscope.

PARK, Geo. Shepard, died in Lostant, Ill., June 6, 1890, aged seventy-nine; founder of Park College (1875), Parkville, Mo.

PARMELEE, Eliab Harvey, at Baiting Hollow, N. Y., July 30, aged seventy-three years; was at one time superintendent of schools at Killingworth, Conn.

PHELPS, Austin, D. D., at Bar Harbor, Me., October 14, aged seventy years; born in West Brookfield, Mass.; graduated at University of Pennsylvania. 1837; professor of sacred rhetoric, Andover Theological Seminary, 1848-79 and emeritus until his death; published theological and pulpit discourses and miscellaneous works.

POOLE, Henry Ward, in the City of Mexico, October; was scientist and author; was civil engineer by profession; was in Mexico during the Maximilian affair and contributed letters to the Boston Transcript and to various scientific magazines.

SCHUYLER, Eugene, LL. D., July 18, aged fifty. He was a scholarly writer; in diplomatic service most of the time from 1866 to 1886, and was a correspondent of this Bureau. He graduated at Yale in 1859, and at Columbia Law School in 1863.

SMITH, Henry H., M. D., April 11, aged seventy-five; was emeritus professor of surgery, University of Pennsylvania.

STERLING, William, supervising school principal, Philadelphia, aged sixty-four, died January 4, 1890.

STUART, George H., April 11, aged seventy-four. He was merchant philanthropist, president of Christian Commission called by President Grant in the formation of Indian Commission.

TAYLOR, Dr. Franklin, April 16, aged sixty-one years; ex-president of Central High School, Philadelphia.

THOMS, Matthew Hueston, at Cincinnati, December 15, aged fifty-four; was born in Cincinnati; graduated Yale 1862; bequeathed $75,000 for the endowment of the William Thoms Professorship, University of Cincinnati.

WALDO, Seth Hardin, died at Geneseo, Ill., October 30, aged eighty-eight; graduated at Amherst 1831, and at Andover Theological Seminary 1834; became preacher, also teacher at Phillips, Andover, 1832-33, Oberlin, 1834-35, Grand River, Ohio, and Bellevue 1842-54.

WELCH, R. Bethune, D. D., LL. D., was born in New York; graduated at Union College in 1846, at Auburn Theological Seminary in 1852; was professor in Union College 1860-76, and in Auburn Theological Seminary until his death, June 20, 1890, at Healing Springs, Va., aged sixty-six. He was delegate to religious gatherings at Belfast and Berlin in 1884, and at London in 1888. He was noted as preacher and teacher.

WHITTLESEY, William, May 10, aged eighty-four years. Graduated at Yale; taught a young ladies' school at New Haven; taught also in Mobile, in Claverack, N. Y., and Berlin, Conn.

WILSON, Mrs. Sarah, in New Haven, April, 1890, aged eighty years. Her life was spent in the education of colored people in New Haven.

WING, Paul, Sandwich, Mass., September 29, aged seventy-nine years. He was a member of the legislature, held a government position in South America, and for thirty years conducted a boarding school in New England.

1891.

AIKEN, Edward, M. D., August 14, aged sixty years; was born in New Hampshire; graduated at Dartmouth, at Andover Theological Seminary and at Yale Medical School; professor of Materia Medica and Therapeutics in the New England Medical College, 1864-67.

BAIRD, John Gunn, died in Connecticut, aged sixty-five; graduated at Yale, 1852; preacher, 1857-65, and assistant secretary Connecticut State Board of Education, 1867-83.

BANCROFT, George, PH. D., D. C. L., doctor juris (Oxford), at Washington D. C., January 17, aged ninety; was born in Worcester, Mass.; graduated at Harvard; studied at Gottingen, where he received the degree of PH. D.; was tutor at Harvard; with Dr. Coggswell, founded the Round Hill (Mass.) School; was Secretary of Navy, in which office he established the Annapolis Naval Academy; is most widely known as one of America's greatest historians. He published a History of the United States, a History of the Formation of the Constitution of the United States. He was minister at various times to England, Russia, and Germany.

BARKER, Fordyce, M. D., in New York, May 30, aged seventy-three years; was born in Maine; received his medical degree in Paris, 1841; was professor of obstetrics in Bowdoin Medical College; held a similar position in the New York Medical College, and since 1860 in the Bellevue Hospital College; was a member of several medical and scientific societies; was one of the most eminent physicians of the country and the author of monographs on medical subjects which have been widely translated.

BENNETT, Charles Wesley, in Evanston, Ill., April 17, aged sixty-two years. Graduated from Wesleyan University; was principal of Stanstead Seminary, Quebec, and later principal of Genesee Wesleyan Seminary, New York; assistant principal of Fort Plain Seminary, New York; superintendent of public schools, Schenectady; principal of Louisville Seminary, New York; in 1871 was appointed professor of history and logic in Syracuse University, and in 1885 professor of historical theology in the Garrett Biblical Institute, Evanston, Ill.

BILL, A. D., at Cambridge, Mass., in November; was for many years principal of Boston Commercial College.

BLACKINTON, James F., in Winthrop, Mass., January 8, aged seventy-one; was a graduate of Brown University; submaster of the Lyman School, Boston, 1848-61; in 1865 was elected master of Prescott School, which position he held till his death.

BLANCHARD, Miss Elizabeth, in Boston, November 29, aged sixty-one; was born in New Hampshire; graduated at Mount Holyoke, 1858; was soon appointed an assistant, and remained with the seminary until 1888, except when her teaching was interrupted by sickness; visited Europe twice, once specially in the interest of the seminary; in 1883 was elected principal, holding the office five years; was president one year, being the last principal and the first president; was related to Dr. Howard Crosby.

BOVARD, M. M., D. D., died December 24; native of Indiana; graduate of De Pauw University, and was president of South Carolina University.

BURCHARD, Samuel D., at Saratoga, in September, aged seventy-nine; graduated at Center College, Kentucky; was chancellor of Ingham University, Le Roy, N. Y., 1839-79; was afterward president of Rutgers Female College.

CARTER, Samuel P., May 26, rear-admiral, U. S. Navy; ex-superintendent Annapolis Naval Academy.

CROSBY, Howard, D. D., in New York City, March 28, aged sixty-six; was for eight years professor of Greek in the University of New York; 1859-63 was professor of Greek in Rutgers College; was chancellor for some years of the University

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of New York; a prolific writer, and besides magazine contributions, produced "Notes on the New Testament" and a life of Christ; one of the American revisers of the New Testament; an eminent preacher, and a profound scholar.

CURTIS, Leonidas Arthur, died Waukegan, Ill., June 19; born, Belvidere, Ill; graduated at Dartmouth, 1884; principal Ironton, Ohio, high school, 1884–85; teacher southern division high school, Chicago, Ill., 1885 until death.

DARLING, Henry, D. D., LL. D., at Clinton, N. Y., April 20, aged seventy-seven; was born in Pennsylvania; graduated at Amherst, 1842; was elected president of Hamilton College in 1881.

DENNETT, Daniel, at Brookhaven, Miss., January 5, aged seventy-eight; was born in Maine; was a school teacher both North and South; at one time was chief editor of the New Orleans Picayune, and for the past fifteen years has been its agricultural editor.

DONALDSON, Frank, M. D., a noted specialist, and professor in the Maryland University of Medicine.

EADS, John R., A. M., at Ashland, Ky., December 25, aged sixty-one; was born in Kentucky; was educated at College Hill, Cincinnati; while pastor at Augusta, Ky., taught natural science and history in Augusta Collegiate Institute; in 1887 opened a school at Ashland, Ky., and soon became medium of donations to Board of Education of Kentucky Conference; founded Ashland Collegiate Institute, of which he was president when he died. He was chaplain of the Fourth Kentucky U. S. Volunteers.

FESSENDEN, Charles P., at Bangor, Me., November 29; was forty years an instructor in penmanship in the public school.

FREDININCK, John, July 31; a professor at Bluffton, Ala., and dean of the University of the South.

FURMAN, James Clement, D. D., in Greenville, S. C., March 3; was educated at Charleston College; in 1843 was made professor in Furman Theological Institute, and when that institution was expanded into a university he became its president; was for several years an editor of the Baptist Courier.

GALE, Ezra White; died at St. John, New Brunswick, March 13; born in New Hampshire May 9, 1824; graduated Dartmouth, 1843; taught South Hampton, N. H., 1843–46; Amesbury and Ipswich, Mass., 1884–88, then in Derby Academy and Malden, Mass.; four years in Erie, Pa.; United States consul St. John, New Brunswick, 1881–85.

GOODMAN, Jacob; in Denver, November 22; aged thirty-six; was born in Baltimore; graduated Yale, 1876; teacher in the Baltimore public schools, and became principal of grammar school, which place he held till his last illness.

HANCOCK, John, A. M., PH. D., at Columbus, Ohio, June 1, 1891, aged sixty-six; was born in Ohio, near birthplace of Gen. Grant; educated in district schools; became assistant grammar school principal, Cincinnati, in 1853. Mr. Hancock became principal and so remained till 1864 when, on a large salary, he taught in a business college and edited News and Education; after this, was assistant editor in the house of Sargent, Wilson & Hinkle; for seven years superintendent public schools, Cincinnati; for a number of years superintendent of schools, Dayton; in 1886, had charge of the Ohio Educational Exhibit, New Orleans Exposition; became superintendent of Chillicothe schools; in 1888 was appointed, and in 1890 by election became commissioner of common schools for the State of Ohio; trustee of McNeely Normal school, and of the Ohio State University, Athens, Ohio; from 1852 was an active member of the Ohio State Teachers' Association and its president in 1859; member of National Educational Association and its president in 1879; was also member of the Council of Education and of the noted Round Table, a man of high moral purpose, an enthusiast and optimist in education, a lover of good literature; his kindheartedness toward everybody always won him friends.

HAND, Daniel, at Guildford, Conn., December 17, aged ninety; was one of the greatest philanthropists of the decade; his gifts and bequest to the American Missionary Society amounted to over a million dollars: the fund is to be held in trust for the education of the colored people of the South.

HASSELGUIST, T. N., D. D., at Rock Island, Ill., February 4, aged seventy-five; was born in Sweden; came to America in 1852, and was for thirty years president of Augustana College.

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HILL, Thomas, D. D., LL. D., at Waltham, Mass., November 21, aged seventy-three; was born in New Brunswick, N. J.; graduated from Harvard 1843, and the Divinity School 1853; in 1859 succeeded Horace Mann as president of Antioch College, Ohio; 1862–68 was president of Harvard; accompanied Louis Agassiz in his South American survey expedition; invented an astronomical instrument, the occultator; edited mathematical text-books; published poems and addresses, and contributed to many periodicals; had great influence in shaping the order of studies for many students, and was a man who thought for others.

HODGE, Caspar Wistar, D. D., in Princeton, N. J., September 27; graduated at Princeton and appointed instructor of Greek in the college; in 1861 accepted the chair of New Testament Greek and Biblical Literature in the Theological Seminary; in 1879 was appointed professor of New Testament Greek and Exegesis.

JOY, Charles Arad, PH. D., at Stockbridge, Mass., May 28, aged sixty-eight, was born in Ludlow, N. Y.; graduated from Union College 1844, and from the Harvard Law School, 1847; studied chemistry abroad, and at Gottingen received his degree of PH. D.; was professor of chemistry in Union College: was professor of chemistry in Columbia, 1857–77; was president of the Lyceum of Natural History, chairman of the Clinic Association of the American Institute, and foreign secretary of the American Geographical Society; was editor of the Scientific American at one time, and of the Journal of Applied Chemistry.

KENDRICK, Col. Henry Lane, A. M., LL. D., in New York City; born in New Hampshire, graduated at United States Military Academy; for twelve years was assistant professor of chemistry, mineralogy, and geology at West Point: in 1857 was appointed professor, which place he held until he was retired, 1880. Prof. John Kendrick, of Marietta, Ohio, was his brother.

KINLOCH, R. A., M. D., in Charleston, S. C., December 23; was dean of the faculty of South Carolina Medical College, ex vice-president of the American Medical Association, and member of the Association of Surgeons.

LAIN, Lewis Flanders, died in Canisteo, N. Y., December 9, aged eighty-five; born in New Hampshire; graduated Dartmouth, 1830; teacher Academy of Sanbornton, N. H., 1830–31; studied at Andover Theological Seminary; preached in Ohio and New York; one of the founders of Canisteo Academy.

LEACH, Daniel, D. D., LL. D., in Providence, R. I., May 16, aged eighty-five; was a graduate of Brown University and Andover Theological Seminary; became principal of a classical school in Roxbury, 1838; was agent of the Massachusetts Board of Education 1848–55; superintendent of public schools in Providence, 1855–84; a member of the Rhode Island Board of Education, a life trustee of Brown University, and the author of several text-books.

LE CONTE, John, LL. D., in April; was born in Georgia; graduated from Franklin College, 1838, and College of Physicians and Surgeons, New York; professor in Franklin College, 1845–55; lecturer to the Medical College, New York, 1855–56; in 1856 became professor in South Carolina College; was appointed professor of physics and industrial mechanics in the University of California, acting president, 1869–70, and president 1870–71. Joseph Le Conte, LL. D., of the University of California, is his brother.

LEIDY, Joseph, M. D., LL. D., at Philadelphia, April 30, aged sixty-seven; was born in Philadelphia; graduated at the medical college of the University of Pennsylvania, 1841; was pro-sector to the chair of anatomy in the university, 1845–46; demonstrator of anatomy in Franklin Medical College; in 1853 was elected professor of anatomy in the University of Pennsylvania; in 1876 was appointed professor of natural history in Swarthmore College; was a member of the American Academy of Natural Sciences, and published a number of scientific books.

LINCOLN, Prof. John L., LL. D., of Brown University, Providence, R. I., October 17; he studied in the Boston Latin School, and graduated at Brown in 1836; studied at Newton and was then appointed tutor at Brown; spent three years in German universities and in 1845 became professor of Latin and held that position until his death; for eight years during this time was principal of Kingsbury Seminary for Young Ladies; edited Livy and Horace.

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LINDSLEY, Aaron L., D.D., LL. D., at Portland, Oregon, August 12, aged seventy-four years; was born in New York; graduated at Union College and Princeton Theological Seminary; in 1886 was appointed to the chair of practical theology in San Francisco Presbyterian Theological Seminary.

LOCKETT, Col. Samuel H., in Bogota, United States Colombia, South America, October 12; was born in Alabama; graduated at West Point; was several years professor in University of Louisiana, afterward professor in the University of Tennessee; was first assistant under Gen. Stone in the construction of the Bartholdi Statue of Liberty.

LOWELL, James Russell, LL. D., died at Cambridge, August 12, aged seventy-two; was born at Elmwood, where he died; graduated at Harvard in 1838, and at the law school in 1840; was admitted to the bar in same year. From 1841 he devoted himself specially to literature; was poet, essayist, teacher, and statesman. His Bigelow papers, which appeared in the Boston Courier 1846-'48, were at once pronounced a masterpiece. In 1855, on Longfellow's resignation, was appointed professor of modern languages and belles-lettres in Harvard; in 1863 became joint editor with Prof. C. E. Norton, of the North American Review, and remained so until 1872; in 1857 was the first editor of the Atlantic Monthly; was presidential elector in 1876; in 1877 was appointed to the Spanish mission; in 1880 transferred to the Court of St. James, from which he was recalled in 1885. His oratory was graceful and natural, as was his pen.

LOWELL, Robert T. Spence, D. D., at Schenectady, N. Y., September 12, aged seventy-four years; was the older brother of James Russell Lowell; graduated Harvard; entered the Episcopal ministry; was headmaster St. Mark's school, Southboro, N. Y., in 1873-79; was also professor of Latin language and literature in Union College.

MCIVER, Stimson, in New York City, September —, aged sixty-eight; was Irish by birth; for twenty-eight years he had been principal of Grammar School No. 46.

MARSHALL, J. L. B., at Kendall Green, Mass., May 6; he was associated with Gen. S. C. Armstrong in Hawaii, and ardently supported him as trustee and treasurer of Hampton Instiiurte.

METCALF, Caleb Buffum, at Seabright, N. J., July 31, aged seventy-seven; was born in Royalston, Mass.; graduated Yale, 1842; was teacher in Boston public schools; for ten years principal of Thomas Grammar School, Worcester; in 1856 opened Highland Military Institute, where he remained till 1888; a member of public school board, 1869-81.

MOEN, Phillip L., at Worcester, Mass., April 23, aged sixty-seven; benefactor to education.

O'CONNOR, Jeremiah, S. J., in New York City, March –, aged forty-nine; was born in Ireland; educated at St. Joseph's College, Philadelphia; was for five years president of Boston College.

PACKARD, Miss S. B., Washington, D.C., June 25. One of the founders and associate principal of Spelman Seminary, a school for colored girls in Atlanta, Ga.

PADDOCK, Benj. H., D. D., bishop of Massachusetts, March 9, aged sixty-three; founder of schools.

PARTON, James, Newburyport, Mass., October 17, aged sixty-nine; began to write while a teacher in New York and Philadelphia; was born in England; of world-wide fame as biographer.

PECK, William Henry, died at Madison, Wis., December 6. Born in Vermont; graduated at Dartmouth, 1864; taught in Union, Wisconsin, 1863; Stoughton, 1863-64; principal of high school, Mineral Point, 1864-67; also, 1868-70. Superintendent of schools there in 1871-72, and professor of Iowa College, 1872-73.

PRATT, Charles, in New York City, May 4, aged sixty; was born in Massachusetts; was a successful merchant, and out of his large accumulation gave the Pratt Library building to Amherst College; gave also to many charities, the church, Rochester Theological Seminary, the Adelphi Academy, and founded Pratt Institute, and the Asa Pratt Free Reading Room in Wilbraham, his native town. His son is director of the Pratt Institute.

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SAVAGE, Joseph, at Lawrence, Kans., December 30; pioneer in planting churches and schools in Kansas; one of the organizers of the Lawrence Academy of Science; special promoter of arboriculture, etc.

SEYMOUR, Nathan Perkins, LL. D., at New Haven, December 28, aged seventy-eight; was born in Hartford; graduated at Yale, 1834; rector of the Hopkins Grammar School, Hartford; tutor at Yale; in 1840 accepted the chair of Latin and Greek at Western Reserve University; resigned in 1870, but was made professor emeritus; appointed lecturer on English literature, which place he held till his death.

SHACKELFORD, C. C., at Brookline, Mass., formerly professor in Cornell University.

SHERMAN, Miss Miriam Stannard, St. Louis, April 12, was born in Connecticut; a life-long school teacher in different States, and for twenty years in the St. Louis High School.

SHERMAN, Gen. W. T., LL.D., lawyer, teacher, February 14, aged seventy; was correspondent of the Bureau of Education.

SMITH, George C., D. D., in Carmel, N. Y., December 17, aged sixty-one; born in Vermont; graduated at Wesleyan University, 1856; professor at Tilton, N. H.; president Newbury (Vt.) Collegiate Institute till appointed president of Drew Theological Seminary, founded by Daniel Drew in 1866.

SOLDAN, Frederick J., Peoria, Ill., November, aged thirty-nine; was born in Frankfort, Germany; came to this country when seventeen, having had the advantage of the thorough training of the German schools; was for some time actuary of the St. Louis Public Library; became librarian of the Peoria Public Library in 1890. The library was his love and grew greatly in efficiency under his management. He was a model librarian and was a great favorite among its patrons. He was brother of Prof. Louis F. Soldan, principal of the St. Louis High and Normal School.

SPENCER, Henry C., in Washington, D. C., August 30, aged fifty-three; was born in Geneva, Ohio. His whole life has been devoted to business teaching; in 1859 superintendent of penmanship in Buffalo; in 1864 superintendent in the forty Bryant & Stratton colleges; for twenty-five years was president of the Spencerian Business College in Washington; was one of five brothers who published the Spencerian copy books, and was known as "the prince of blackboard writers."

SPENCER, J. Wesley, in Northfield, Vt., November 28; principal of the high school.

STUART, Alex. H. H., February 13, aged eighty-four; ex-Secretary of Interior Department and member of Peabody board of trustees.

SWAN, Isaac, at Stoughton, Mass., May 25, aged seventy-six; was for forty years master of Stoughton School at Dorchester, and taught also in his native town.

TAFT, Alphonso, LL. D., aged eighty, lawyer, judge, minister to Austria, and also to Russia; attorney-general, trustee of Yale; was correspondent of the Bureau of Education.

THACHER, Dr. James K., at New Haven, Conn., April 20, aged forty-three years; graduated from Yale in 1868; was professor of physiology in Yale University; had charge of the medical work of the Century Dictionary; his great reputation was made in the comparative anatomy of fishes.

TOLMAN, Albert, died August 17, Pittsfield, Mass., aged sixty-seven; born in Massachusetts; graduated Amherst, 1845; taught in Montague and Wayland, Mass.; tutor in Amherst, 1848-51; teacher Maplewood, 1851-55; founder and principal Taghonic Institute; teacher Pittsfield High School, 1868-78.

TOURJEE, Eben, Doctor of Music, in Boston, April 21, aged fifty-five years; was born in Rhode Island; in 1859 was called to East Greenwich Academy, to establish in connection with it a musical institute; established the Providence Conservatory of Music, and in 1867 the New England Conservatory in Boston; organized the chorus of the Peace Jubilee. His "Plea for Music in the Public Schools" before the National Teachers' Association was published by the Bureau of Education.

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TUFTS, Col. Gardiner, at Concord, November 23, aged sixty-three; in December, 1869, was elected principal State primary school at Mouson and five years later resigned to accept the superintendency of the new State reformatory, whose system he developed and operated. This position he held until his death.

WICKERSHAM, James Pyle, A. M., LL. D., in Lancaster, Pa., March 25, aged sixty-six years; was born in Pennsylvania, graduated at Unionville Academy; principal of Marietta Academy, Pennsylvania, 1845; in 1854 was elected the first superintendent of schools of Lancaster County; in 1856 was chosen first principal of the Millersville Normal School, the first State normal school; in 1866 was appointed State superintendent of public instruction which position he held for nearly fifteen years; aided in organizing the Pennsylvania State Teachers' Association and the National Educational Association; was the seventh president of the latter; was twice elected president of the National Department of School Superintendents; for ten years was editor of the Pennsylvania School Journal, and published a work on "School Economy," and "Methods of Instruction;" his last literary work was the history of education in Pennsylvania; in 1882 was appointed minister to Denmark; was the most influential man after Dr. Burrows in forming the public school system of Pennsylvania and in fixing its methods; an able writer, ready speaker, effective organizer and one of the foremost of his day among the educators of America.

WILEY, Rev. Dr. Philander, at Denver, Colo., September 23, for many years professor of Greek in De Pauw University.

WILLSON, Z. G., at St. Cloud, Minn., May 21, aged sixty-nine; was connected with the St. Louis public schools for many years, and at one time edited the Western, an educational and library journal.

WINCHELL, Alexander, LL. D., at Ann Arbor, February 19, aged sixty-six; graduated at the University of Michigan, 1854; professor of geology, zoölogy, and botany; occupied the same position in the University of Kentucky 1866-69; in 1873 accepted the chancellorship of the University of Syracuse; in 1874 resigned to become professor of geology, botany, and zoölogy in the same institution, which he held until 1879; from 1873-79 held a similar position in Vanderbilt University; in 1879 was recalled to his old chair at Ann Arbor, which he held till his death. His bibliography numbers 200 titles: established seven new genera and 304 new specimens, most of which were fossil; his name has been given to 14 new species.

WOODFORD, John Beach, at Syracuse, N. Y., April 27, aged seventy-six; was born in Avon, Conn.; graduated at Yale 1839; was principal of private school in Middletown; in 1846 was elected principal of Southington Academy, Conn.; for thirteen years principal of academy at Windsor, Conn.

FOREIGN.

1889.

QUESNEVILLE, Dr., November 14, aged eighty years; an eminent French chemist, and founder of the Moniteur Scientifique.

1890.

BECKER, Miss Lydia, at Geneva, July 18; had devoted her life to the saving of children in Manchester, England; was seven times elected to the school board; called the "pioneer of woman's suffrage in England."

BOELLINGER, John Ignatius, in Munich, January 10, aged ninety; a professor and theologian.

BRÜLLOW, Dr. Friedrich, in Berlin, September 15; founder of the Diesterweg fund.

CARRUTHERS, John, D. D., September 1, aged eighty-nine; called the father of the English Congregational Church.

DELITZSCH, Francis, D. D., at Leipsic, aged seventy-eight years; was professor in ordinary in the University of Rostock and that of Erlangen, professor of

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Old Testament Exegesis in the University of Leipsic, and author of Old and New Testament commentaries.

DUFF, David, D. D., in Edinburgh, August —; professor of church history.

FEULLET, Octave, in Paris, December —; brilliant writer of the ideal school, and last imperial librarian.

FRICKEN, VON, Dr. William, in Wiesbaden, December 29; councillor of education.

GERBER, VON, Dr., in Germany, December —; minister of education in Saxony.

HUMBECK, VON, Pierre, July 5; first minister of public instruction in Belgium: author of the Liberal Education Code, which effected such progress before the reaction of 1884.

JOULE, Dr. James Prescott, an eminent scientist, noted for his treatment of the conservation of energy and the mechanical equivalent of heat.

LIDDEN, Henry Perry, September 9, aged sixty-one; canon of St. Paul's Cathedral.

LUTZ, VON, Baron, ex-premier and minister of education, Bavaria; correspondent of the Bureau of Education.

MCGREGOR, ———, April 25; principal of McMaster College, Ontario.

NEESIMA, Joseph Hardy, LL.D., at Oiso, Japan, January 23, aged forty-seven; in his youth, desiring to learn of Christianity, he escaped from Japan, when such an act was punishable with death, and came to America on a vessel owned by Alpheus Hardy; was educated at Phillips Andover Academy, Amherst, and Andover Theological Seminary, at the expense of Mr. Hardy; was interpreter to the Iwakura Special Embassy on its visit to this country; was offered a place in the Japanese ministry, but declined; became missionary to Japan under the American Board; founded the Christian school in Kioto, under great difficulties, which was finally made a university.

ROGERS, James Thorold, in Oxford, England, October 13; was professor of economical science and statistics in King's College and professor of political economy at Oxford; was the author of a number of works, including Aristotle's Ethics, Economic Interpretation of History, Six Centuries of Work and Wages, and a history of agriculture and prices in England.

SCHLIEMANN, Dr. Henry, at Naples, December 26, aged sixty-nine; was born in Mecklenburg-Schwerin; was famous as an explorer of Greek archæology; he made a fortune in trade and expended it in the study and collection of Greek antiquities, which he has described in his general works; has greatly contributed to the increase of interest in Greece and in old Troy.

SCHMITZ, Leonard, in England, June; formerly instructor to Prince of Wales; rector of high school, Edinburgh; was named for the professorship of Greek, Edinburgh University; classical examiner to the University of London.

BERG, —, in Copenhagen, December 2; a teacher, and leader of the radical wing in Parliament.

BOBIES, Rector, in Vienna, November 13; president of the Austrian Teachers' Association.

BUDOZIS, Dr. Friedrich, in Berlin, March 11; historian of Brandenburg.

CIRIACY-WANTRUP, VON, Dr., in Arnsberg, Germany, July; school councilor and leader of the conservative party in school affairs.

CHADWICK, Edwin C. B., July 5; aged eighty-nine; an English social economist and lawyer; was assistant commissioner of the poor law commission; a member of the commission of inquiry into the labor of young persons in factories; in 1838 he made an inquiry into the causes of local diseases and the improvement of habitations in the metropolis.

COLLINS, George, at London, April 2; was a member of the London school board, master of model school and of methods in the borough training school, Borough-Road, and member of the editorial staff of the Schoolmaster.

CORCI, Carlo Maria, June 10; aged ninety-one; a Roman Catholic professor of theology at Rome.

COSSACK, Dr. K. W., in Dantzic, November; author of literature for schools.

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DIETLEIN, Waldemar, Rector, in Dortmund, Germany, October 31; author of the best German readers.

ESSER, Dr., in Berlin, October; chief of division in the ministry of education.

FISCHER, Dr., in Potsdam, July 19; well-known teacher of gymnastics.

FRICKE, F. William, in Weisbaden, March 28; promoter of spelling reform.

FRISCHBIER, Hermann, at Königsberg, December 8; a promoter of the teachers' association.

GABELLI, Aristide, at Padua, October 7, aged sixty-one; a prominent educator.

GAUTIER, Col. Emile, at Geneva, November 24, aged sixty-eight; an eminent astronomer and director of the Observatory, Geneva.

HASNER, Dr. Leopold (Ritter, von Artha), at Ischl, Austria, June 5; the father of the modern school in Austria.

HAUPT, August, in Berlin, July 4; professor of music.

HÄUSELMANN, J., in Biel, Germany, March 18; a promoter of drawing.

HEUMANN, G., in Gorlitz, Germany, March 21; superintendent of schools.

KENNEDY, William, M. A., in Scotland, December; clerk to the school board of Glasgow.

KERN, Dr. Hermann, at Bruneck in the Tyrol, July 4, aged sixty-eight; was for many years director of the Friedrich Wilhelm Gymnasium in Berlin; was a scientific student and educator, and published several educational books, and for many years was a member of the board of examiners for positions in higher schools.

KOKOWOSKY DE, W., Lieut. Gen., September; founder and director of the Russian Museum of Pedagogy.

KUENEN, Abraham, in Germany, December 10, aged sixty-three; a professor of theology.

LANGENBERG, Eduard, in Berlin, February 16; pupil and biographer of Ad. Diesterweg.

MAGALHAES, Benjamin Constant Botelho, January 22; a prominent Brazilian educator and scientist, and founder of the Republic.

MOSELEY, Henry Nattridge, November 10, aged forty-seven; professor of anatomy at Oxford.

MÖWING, Regborg, in Königsberg, August 6; founder of the teachers' association.

OEHLWEIN, Dr., in Weimar, October 10; a promoter of deaf-mute education.

PACHECHO, D. Carlos, formerly minister of education, Mexico.

PATRICK, Brother (John P. Murphy), in Paris, April 25, aged sixty-nine; was born in Ireland; entered as novitiate into the order of the Christian Brothers at Montreal; was director of the Brothers' School, St. Louis, in 1861; was transferred to Manhattan College, New York, which institution prospered greatly under his care; his last position was that of second assistant to the superior-general of the Christian Brothers' schools.

PEDRO, DOM, II, ex-Emperor of Brazil, in Paris, December 4, aged sixty-six; became sovereign at the age of six, and abdicated in 1889. His tastes were scholarly, his ideas of government liberal; he established justice, encouraged schools, libraries, and colleges, traveled extensively, visited the United States, and was interested in the Bureau of Education, to whose chief he offered a decoration of the Empire.

PERUZZI, UBALDINO, in Italy, September 9; called the Modern Pericles.

PRESSENSE, DE, Edmond D., at Paris, April 8, aged sixty-seven.

PRANGE, William, in Breslau, March 25; school councilor and editor of Lübens Pädag. Jahresbericht.

QUICK, R. H., M. A., in Surrey, England, March 9; was educated at Cambridge; assistant master at Harrow and Cranleigh, lecturer at Cambridge; writer of pedagogics: is known among teachers the world over by his *Educational Reformers*.

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RJEDKIN, Peter, LL. D., in St. Petersburg, March 7, aged eighty-three; an eminent Russian scholar; was a graduate of the universities of Dorpat and Moscow; became the first professor of the Cyclopædia of Law at the University, Moscow; in 1863 was called to be professor ordinarius at St. Petersburg, published a History of Law and a History of Philosophy.

REE, Anton, Dr., in Hamburg, January 1; the well-known champion of the common schools.

SCHLAIKIER, in Meiningen, March 14; school councilor.

SCHUBERT, Otto, Rector, in Haynan, Germany, July 9; superintendent of schools.

THOMISSEN, Dr., in Brussels, November; ex-minister of public instruction.

TICHELMANN, Rector, in Königsberg, July 17; promoter of Pestalozzi societies.

TÖPLER, F., in Berlin, December 10; editor of educational journals.

VELHAGEN, Auguste, in Leipsic, December, aged eighty-two; a publisher of books and atlases on the principle of "good and cheap."

WÄCHTER, Robert, in Rudolstadt, Germany, March 28; school councilor.

WIDGERY, William Henry, M. A., England, assistant master in University College school, August 26; was born at Exeter, March 11, 1857; entered at St. John's College, Cambridge, 1874, and graduated seventh senior optime in the mathematical tripos; taught at Dover College; gained the Harness prize for essay on Hamlet, which was commended in the Atheneum; was second master at Brewer's School, E. C., London, and gained "prizes for Icelandic and Gothic;" in 1883 assumed the work which he continued until his death, meantime having studied in Berlin in 1886. His tract on teaching languages was republished and translated into other languages. His sketch of education at the Paris Exposition appears in this Report. He was librarian and an active member of the council of the Teachers' Guild. Friends have joined in creating a fund for a memorial to his memory.

WOLFF, Emil, Rector, in Apolda, Germany, February 16; a pedagogical author and editor of *Allgemeine Schulblatt*.

WULKOW, August, in Stettin, Germany, October 9; president of teachers' association.

ZAHN, Franz, Dr., in Mörs, Germany, July 9; the successor of Ad. Diesterweg in the Normal School at Mörs, and author of a Biblical history.

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PART III.

STATISTICAL TABLES.

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TABLE 1.—*Statistics of population, private schools, and public school enrollment, containing over*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	ALABAMA.									
1	Birmingham	26,178	7-21	4,561	5,493	10,054	.....	1,528	1,810	3,338
2	Eufaula	4,394	7-21	(1,345)		1,345	.....	(540)		540
3	Huntsville	7,995	7-21	(1,888)		1,888	.....	(444)		444
4	Mobile	31,076	.....	.....		.....	.....	1,211	1,348	2,559
5	Montgomery	21,883	7-21	(3,907)		3,907	250	(1,754)		1,754
6	Selma	7,622	7-21	(3,016)		3,016	.....	(562)		562
7	Tuskaloosa*	4,215	7-21	(1,936)		1,936	.....	(588)		588
	ARKANSAS.									
8	Fort Smith	11,311	6-21	1,270	1,457	2,727	500	902	1,073	1,975
9	Helena	5,189	6-21	920	949	1,869	300	359	391	750
10	Little Rock	25,874	6-21	4,112	4,325	8,437	720	1,874	2,187	4,061
	CALIFORNIA.									
11	Eureka	4,858	5-17	1,021	1,044	2,065	200	656	637	1,293
12	Los Angeles	50,395	6-21	5,274	5,512	10,786	1,436	4,173	4,115	8,288
13	Oakland	48,682	5-17	5,788	5,598	11,386	2,013	4,565	4,490	9,055
14	Pasadena	4,882	5-17	(1,775)		1,775	75	719	708	1,427
15	Riverside	4,683	5-17	427	422	849	36	423	446	869
16	Sacramento	26,386	5-17	2,693	2,664	5,357	504	2,213	2,838	5,051
17	San Diego	16,159	5-17	1,740	1,845	3,585	235	1,362	1,377	2,739
18	San Francisco	298,997	5-17	30,308	30,334	60,642	8,253	19,379	19,804	39,183
19	San José	18,060	5-17	2,191	2,453	4,644	.....	1,737	1,662	3,399
20	Santa Barbara	5,864	5-17	(1,802)		1,802	150	629	599	1,228
21	Santa Cruz	5,596	5-17	816	887	1,703	185	663	658	1,321
22	Santa Rosa	5,220	5-17	681	720	1,401	182	554	594	1,148
23	Stockton	14,424	5-17	1,287	1,419	2,706	434	1,334	1,499	2,833
24	Vallejo	6,343	6-18	(1,250)		1,250	.....	*b*500	*b*600	*b*1,100
	COLORADO.									
25	Aspen	5,108	6-21	.....		.....	25	503	492	995
26	Colorado Springs	11,140	6-21	(1,615)		1,615	33	*647	*665	*1,312
27	Denver, Dist. No. 1	.....	.....	.....		.....	.....	4,131	4,239	8,370
28	Denver, Dist. No. 2	106,713	6-21	2,833	3,130	5,963	250	1,916	2,007	3,923
29	Denver, Dist. No. 17	.....	6-21	.....		.....	350	761	771	1,532
30	Leadville*	10,384	6-21	937	925	1,862	450	603	572	1,175
31	Pueblo Dist. No. 1	24,558	6-21	702	879	1,581	.....	815	772	1,587
32	Pueblo Dist. No. 20	.....	6-21	944	898	1,842	250	608	654	1,262
	CONNECTICUT.									
33	Ansonia	*b*5,000	4-16	(1,200)		1,200	20	(1,152)		1,152
34	Birmingham *c*	4,413	4-16	(1,305)		1,305	239	(882)		882
35	Bridgeport	48,866	4-16	(11,398)		11,398	1,081	3,794	4,042	7,836
36	Bristol	*c*7,382	4-16	(1,513)		1,543	35	(1,468)		1,468
37	Danbury *c*	16,552	4-16	(3,494)		3,494	584	(2,409)		2,409
38	Greenwich *c*	10,131	4-16	(1,996)		1,996	388	(1,280)		1,280
39	Hartford*	53,230	4-16	(9,984)		9,984	2,200	(7,867)		7,867
40	Manchester *c*	8,222	4-16	(1,817)		1,817	22	(1,565)		1,565
41	Meriden	21,652	4-16	(5,641)		5,641	†,000	(4,355)		4,355
42	Middletown	9,013	4-16	(1,590)		1,590	600	(1,074)		1,074
43	New Britain	*c*19,007	4-16	(4,089)		4,089	1,600	(2,290)		2,290
44	New Haven	81,298	4-16	(18,314)		18,314	1,937	(15,573)		15,573
45	New London	13,757	4-16	(2,716)		2,716	160	(2,599)		2,599
46	Norwich	16,156	4-16	(1,523)		1,523	400	(1,117)		1,117
47	Rockville	7,772	4-14	952	1,000	1,952	395	613	800	1,413
48	South Norwalk	*b*4,000	4-16	(1,172)		1,172	82	(999)		999
49	Stamford	*c*15,700	4-16	1,667	1,606	3,273	549	(2,321)		2,321
50	Thompsonville*	*b*4,000	4-16	(1,145)		1,145	300	(614)		614
51	Toppington *c*	4,283	4-16	(872)		872	0	(866)		866
52	Wallingford *c*	4,230	4-16	(929)		929	0	(821)		821

*Statistics of 1888-89.

a The colored schools were in session 160 days.

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attendance, supervising officers, teachers, and accommodations in cities and villages 4,000 inhabitants.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
177	384,267	2,171	1	0	1	12	47	59	6	2,350	12	1
a120	40,920	392							2			2
160	53,120	332							2			3
180	430,460	2,447							3		10	4
170			1	0	1	4	33	37	5	1,700	12	5
168									1			6
160	68,160	426	1	0	1	4	10	14	2	525		7
190	228,000	1,200	2	0	2	6	32	38	5	2,060	12	8
158	97,312.2	615.9	0	0	0	2	13	15	4		12	9
177	473,298	2,674	1	0	1	7	50	57	14	3,249	11	10
202	192,819.5	954.5	1	0	1	2	21	23	12	1,400	10	11
172	1,013,494	5,825	5	4	9	10	153	173	23	5,610	13	12
201	1,259,492	6,372	11	1	12	3	142	145	17	6,751	13	13
173	179,229	1,036	1	2	3	4	26	30	6	1,643	11	14
179	98,828.5	552	1	0	1	1	17	18	4	720		15
181	758,028	4,188	4	5	9	5	96	101	15	*4,000	11	16
175	333,908	1,908	1	2	3	3	56	59	15	2,540	12	17
200	5,998,290	30,015	17	39	56	33	684	717	75	36,247	12	18
290	471,400	2,357	1	2	3	10	54	64	11	2,789	12	19
181	159,925	840	1	0	1	3	22	25	6	1,106	12	20
196	190,307	951.5	1	0	1	2	22	24	5	1,250	12	21
191	153,797.5	805	1	0	1	*3	*17	*20	3	*950	11	22
210	384,090	1,829	1	0	1	11	36	47	9	2,500	12	23
b180	b180,000	b1,000	4	1	5	4	17	21	4	1,200	12	24
180	107,266.5	599	1	0	1	0	15	15	4	650	12	25
*185	*158,698	*857.8	*1	*0	*1	*3	*21	*24	*4	*1,000		26
	5,412		4	1	5	13	119	132	16	6,600		27
185	433,016	2,334.6	8	2	10	3	58	61	8	3,186		28
182	150,856	964	2	1	3	7	33	40	4	1,152	12	29
156	116,429	746	1	0	1	1	15	16	2	900		30
166	160,403	864	1	0	1	6	28	34	5	915	12	31
190	122,280	713	2	1	3	4	26	30	5	900	12	32
195	b165,750	c850	1	0	1	2	24	26	3	b1,400	13	33
197.5	109,225	583				(19)		19	3	798		34
193	1,072,289.4	5,555.8	3	0	3	4	145	149	22	7,502	13	35
191	174,383	913	1	0	1	5	25	30	11	1,346	10	36
198.3	335,127	1,690				(48)		48	15	2,115		37
200	143,000	715				(20)		20	8	880		38
192	b1,017,600	b5,300				27	152	179	18	7,298		39
190	198,930	1,047				(17)		17	6	686		40
199	546,456	2,744	0	0	0	9	78	87	13	3,538	13	41
190	149,720	788	1	1	2	2	22	24	3	1,050	13	42
187	309,298	1,654	1	0	1	3	41	44	11	3,250	13	43
200	b2,231,800	11,159	11	6	17	11	296	307	40	13,296	12	44
195	321,750	1,650	2	1	3	3	45	48	7	3,000	13	45
191	159,658	838	1	0	1	2	27	29	6	1,215	9	46
175	b175,000	b1,000	1	0	1	2	30	32	10	1,374	13	47
196	130,663	667				1	18	19	5		12	48
198	310,362	1,569	0	0	0	(59)		59	19	1,750		49
180	83,966.3	466.5	0	0	0	1	12	13				50
189.1	107,787	570				4	26	30	20	1,741		51
186.4	101,384	560				2	26	28	9	1,327		52

b Estimated.

c This includes the entire town.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	CONNECTICUT—cont'd									
53	Waterbury	28,646	4-16	(6,981)		6,981	1,150	(4,395)		4,395
54	Willimantic	8,648	4-16	(2,065)		2,065	778	(1,198)		1,198
55	Winsted *b*	4,846	4-16	(976)		976	234	(683)		683
	DELAWARE.									
56	Newcastle	4,010	6-21				40	293	324	617
57	Wilmington	61,431						(9,184)		9,184
	DISTRICT OF COLUMBIA.									
58	Washington *c*	230,392	6-18	17,400	18,500	35,900	2,642	12,345	13,123	25,468
59	Washington *d*		6-18	8,918	9,282	18,200	477	4,966	6,472	11,438
	FLORIDA.									
60	Key West	18,080						807	503	1,310
61	Pensacola	11,750	6-18	1,428	1,411	2,839	300	713	709	1,473
62	Tampa *e*	5,532	6-21	380	350	730	70	255	270	525
	GEORGIA.									
63	Americus	6,398	6-18	(1,276)		1,276	85	529	619	1,148
64	Athens	8,639	6-18	1,116	1,210	2,326	100	583	630	1,213
65	Atlanta	65,533	6-18	6,068	6,726	12,794	1,800	3,616	4,264	7,880
66	Augusta	33,300	6-18	4,633	4,827	9,460	1,650	1,900	1,806	3,706
67	Columbus	17,303		(6,000)		6,000	350	1,073	1,226	2,299
68	Griffin	4,503		(1,200)		1,200	75	(500)		500
69	Macon	22,746	6-18	(10,377)		10,377	500	1,056	986	2,042
70	Rome	6,957	6-18	964	1,032	1,996	278	491	451	942
71	Savannah *	43,189	6-18				1,000	2,854	3,023	5,877
	ILLINOIS.									
72	Aurora	19,688	6-21	2,338	2,344	4,682	880	1,233	1,189	2,422
73	Beardstown	4,226	6-21	651	683	1,334	150	445	431	876
74	Belleville	15,361	6-21	2,656	2,504	5,160	813	1,315	1,198	2,513
75	Bloomington	20,484	6-21	3,124	3,110	6,234	1,000	1,660	1,731	3,391
76	Braidwood	4,461						(1,500)		1,500
77	Cairo	10,324	6-21	1,731	1,825	3,556	525	732	785	1,517
78	Canton	5,604	6-21	697	694	1,391	*0	542	591	1,133
79	Centralia	4,763	6-21	805	800	1,605	65	531	503	1,034
80	Champaign*	5,839	6-21	(864)		864		(775)		775
81	Chicago	1,099,850	6-21	145,087	144,346	289,433	62,713	67,073	68,478	135,551
82	Danville	11,491	6-21	2,327	2,092	4,419	398	1,331	1,388	2,719
83	Decatur	16,841	6-21	2,445	2,362	4,807	400	1,543	1,573	3,116
84	East St. Louis	15,169	6-21	1,613	1,657	3,270	700	913	854	1,767
85	Elgin	17,823	6-21	2,038	2,302	4,340	650	1,377	1,301	2,678
86	Evanston	*f*7,800	6-21	1,012	1,122	2,134	288	663	581	1,244
87	Freeport*	10,189	6-21	1,541	1,683	3,224	519	786	825	1,611
88	Galena*	5,635	6-21	975	1,062	2,037	440	484	443	927
89	Galesburg	15,264	6-21	2,370	2,521	4,891	500	1,121	1,187	2,308
90	Jacksonville	13,935	6-21	1,815	1,891	3,706		917	984	1,901
91	Joliet	23,264	6-21	3,431	3,809	7,240	850	1,747	1,717	3,464
92	Kankakee	9,025	6-21	1,130	1,552	2,682	500	618	584	1,202
93	La Salle	98,55	6-21	2,022	1,971	3,993	780	563	592	1,155
94	Lincoln	6,725	6-21	1,306	1,608	2,916	400	(1,225)		1,225
95	Litchfield	5,811	6-21	988	1,073	2,061	250	585	669	1,254
96	Moline	12,000	6-21	1,552	1,614	3,156	300	1,029	1,097	2,126
97	Monmouth	5,936	6-21	823	925	1,748		618	695	1,313

* Statistics of 1888-89.
a Estimated.
b This includes the entire town.
c First six divisions—principally white.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
195	579,150	2,970	.....	.....	.....	5	82	87	15	4,320	.....	53
200	*d*158,000	*d*790	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
186	79,980	430	.....	.....	.....	(19)		19	6	805	.....	55
206	97,551	473	.....	.....	.....	1	8	9	3	461	9	56
194	1,201,442	6,193	1	0	1	3	172	175	26	8,008	11	57
178	3,460,954	19,418	9	6	15	72	457	529	74	22,824	11	58
177	1,551,271	8,766	7	0	7	20	196	216	22	8,326	11	59
175	190,225	1,087	.....	.....	.....	4	18	23	5	1,300	.....	60
160	161,760	1,011	1	0	1	5	23	28	10	1,600	19	61
160	72,000	450	1	1	2	3	6	9	3	525	11	62
186	*169,480	*892	*0	*0	*0	*4	*13	*17	1	1,180	11	63
175	144,952	881	1	0	1	5	21	26	4	1,120	9	64
195	*1,318,840	*6,580	2	0	2	14	121	135	15	6,575	12	65
193	402,405	2,085	6	0	6	0	50	50	10	3,050	11	66
199	415,502	2,088	1	0	1	6	38	44	6	2,500	11	67
.....	*71,440	*376	2	0	2	3	8	11	2	560	8	68
185	303,585	1,641	3	1	4	5	43	48	10	1,850	9	69
172	122,398	735	3	0	3	(20)		20	4	812	7	70
180	880,380	4,891	.....	.....	.....	28	85	113	8	5,000	.....	71
192	341,982	1,727	1	5	6	3	44	47	7	2,200	12	72
189	99,973	516	1	0	1	*2	*13	*15	*4	*720	8	73
197	461,259	2,342	1	0	1	12	38	50	6	2,600	11	74
177	449,934	2,540	1	8	9	2	75	77	11	2,900	12	75
.....	.....	.....	.....	.....	.....	(21)		21	5	.....	.....	76
180	194,270	1,079	1	0	1	1	27	28	7	1,332	12	77
180	147,473	8,197	1	2	3	1	27	28	6	1,200	5	78
168	128,064	786	1	0	1	2	16	18	4	940	12	79
.....	.....	599	1	0	1	0	15	15	.....	.....	.....	80
195	19,584,447	100,673	120	91	211	175	2,667	2,842	203	123,410	12	81
188	355,338	1,970	1	0	1	9	49	58	8	3,000	12	82
182	428,060	2,330.2	1	0	1	5	42	47	8	2,605	11	83
179	183,418	1,078	1	0	1	9	29	38	4	1,461	12	84
190	386,153	2,042	1	0	1	1	55	56	12	2,528	12	85
195	185,189	944	1	1	2	1	25	26	4	1,200	8	86
.....	242,160	1,235	1	0	1	3	33	36	5	1,800	.....	87
194	125,324	646	1	0	1	2	18	20	4	1,000	.....	88
175	317,800	1,816	3	1	4	3	49	52	8	2,430	.....	89
.....	.....	1,388	1	0	1	3	37	40	7	*1,250	11	90
198	492,610	2,480	1	0	1	3	64	67	10	2,800	12	91
193	163,070	845	2	0	2	1	23	24	4	1,550	12	92
205	187,165	913	1	0	1	2	20	22	6	1,500	12	93
193	171,490	1,090	1	0	1	1	20	21	3	1,090	12	94
171	154,752	925	1	0	1	1	20	22	3	1,246	12	95
176	284,800	1,600	2	2	4	2	39	41	6	2,000	12	96
209	209,000	1,000	1	0	1	1	22	23	4	1,134	12	97

d Seventh and eighth divisions—colored.
* These figures are in part estimated.
f Estimated; not separately returned by census enumerators.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	ILLINOIS—continued.									
98	Ottawa	9,985	6-21	1,469	1,459	2,928	402	814	683	1,497
99	Paris	4,993	6-21	673	690	1,363	40	512	575	1,087
100	Pekin	6,347						588	648	1,236
101	Peoria*	41,024	6-21	6,356	6,184	12,540	1,500	3,377	3,627	7,004
102	Peru	5,550	6-21	620	650	1,270	350	360	397	757
103	Quincy	31,494	6-21	4,832	5,130	9,962	2,300	1,988	2,107	4,095
104	Rock Island	13,634	6-21	2,107	1,994	4,101	825	1,100	1,150	2,249
105	Rockford	23,584	6-21	3,130	3,631	6,761	670	1,812	1,943	3,755
106	Springfield	24,963	6-21	3,702	4,005	7,707	1,200	1,862	1,797	3,659
107	Sterling	5,824	6-21	(838)		838	100	330	365	695
108	Streator	11,414	6-21	2,054	1,996	4,050	*390	1,137	1,145	2,282
109	Waukegan	4,915	6-21	485	595	1,080	150	436	452	888
	INDIANA.									
110	Anderson	10,741	6-21	(2,582)		2,582	200	542	638	1,180
111	Bloomington	4,018	6-21	619	581	1,200		410	419	829
112	Brazil	5,905	6-21	928	1,036	1,964	250	603	649	1,252
113	Columbus	6,719	6-21	(2,133)		2,133	200	675	723	1,398
114	Connersville	4,518	6-21	632	604	1,236		358	389	747
115	Crawfordsville	6,089	6-21	1,357	1,375	2,732	100	599	654	1,253
116	Elkhart	11,360	6-21	1,615	1,599	3,214	250	1,091	1,074	2,165
117	Evansville	50,756	6-21	8,177	8,144	16,321	1,000	3,278	3,198	6,476
118	Fort Wayne	35,393	6-21	6,226	6,235	12,461	3,800	2,184	2,380	4,564
119	Frankfort	5,919	6-21	780	1,000	1,780		630	731	1,361
120	Goshen	6,033	6-21	920	880	1,800	100	705	695	1,360
121	Huntington	7,328	6-21	1,099	1,066	2,165	400	668	686	1,354
122	Greencastle	4,390	6-21	891	915	1,806	150	383	439	822
123	Indianapolis	105,436	6-21	(48,079)		48,079		(23,163)		23,163
124	Jeffersonville	10,666	6-21	3,035	3,385	6,420	400	1,016	1,041	2,057
125	Kokomo	8,261	6-21	1,067	1,041	2,108	90	709	747	1,456
126	Lafayette	16,243	6-21	3,524	3,615	7,139		1,583	1,775	3,358
127	Laporte	7,126	6-21	1,335	1,362	2,697	800	(1,260)		1,260
128	Lawrenceburg	4,284	6-21	855	870	1,725	200	388	420	808
129	Logansport	13,328	6-21	2,466	2,465	4,931	736	1,004	1,069	2,073
130	Madison	8,936	6-21	1,884	2,010	3,894		1,012	975	1,987
131	Marion	8,769	6-21	1,217	1,166	2,383	0	693	700	1,393
132	Michigan City	10,776	6-21	1,565	1,560	3,125	750	577	596	1,173
133	Mount Vernon	4,705	6-21	1,103	1,150	2,253	100	526	576	1,102
134	Muncie	11,345	6-21	1,319	1,329	2,648	125	1,004	1,031	2,035
135	New Albany	21,059	6-21	3,644	3,666	7,310		1,662	1,667	3,299
136	Peru	7,028	6-21	1,249	1,209	2,458	350	600	668	1,268
137	Richmond	16,608	6-21	3,013	3,320	6,333	850	1,282	1,407	2,689
138	Seymour	5,337	6-21	882	900	1,782	250	526	560	1,086
139	Shelbyville	5,451	6-21	1,007	1,106	2,113	200	538	586	1,124
140	South Bend	21,819	6-21	3,411	3,403	6,814	800	1,363	1,518	2,881
141	Terre Haute	30,217	6-21	7,370	6,668	14,038	700	2,506	2,506	5,012
142	Valparaiso	5,090	6-21	821	848	1,669	400	489	485	974
143	Vincennes	8,858	6-21	1,559	1,576	3,135	635	597	634	1,231
144	Wabash	5,105	6-21	788	738	1,526		591	597	1,188
145	Washington	6,064	6-21	1,171	1,151	2,322	854	592	608	1,200
	IOWA.									
146	Atlantic	4,351	5-21			1,480	20	646	662	1,308
147	Boone	6,520	5-21	790	780	1,570	125	700	650	1,350
148	Burlington	22,565	5-21	(8,461)		8,461		2,200	1,988	4,199
149	Cedar Rapids*	18,020	5-21	2,175	3,124	5,299	500	(3,563)		3,563
150	Clinton	13,619	5-21	2,296	2,418	4,714	350	1,247	1,330	2,577
151	Council Bluffs	21,474	5-21	4,119	5,386	9,505	700	1,592	1,768	3,360
152	Creston	7,200	5-21	1,200	1,213	2,413	200	(1,840)		1,840
153	Davenport	26,872	5-21	4,697	4,957	9,654	1,000	2,264	2,265	4,529
154	Des Moines, East	50,093	5-21	2,653	2,641	5,294	300	1,778	1,857	3,635
155	Des Moines, West		5-21	2,956	3,355	6,311	900	1,922	2,152	4,074
156	Dubuque	30,311	5-21	5,289	5,563	10,852	2,500	2,356	2,383	4,741

* Statistics of 1888-89.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
197	250,359	1,270.7	1	0	1	1	33	34	7	1,500	a12	98
182	144,199	792	1	0	1	0	20	20	3	972	12	99
165	142,730	865	1	0	1	2	22	24	4		12	100
196	970,984	4,954	8	4	12	3	126	129	13	6,300		101
200	135,623	678	1	0	1	2	16	18	4	800	12	102
194	542,676	2,797.3	2	2	4	3	61	64	10	3,361	12	103
176	325,072	1,847	2	0	2	2	46	48	8	2,100	13	104
192	526,579	2,742.6	1	0	1	3	77	80	13	3,127	12	105
191	549,793	2,878.5	1	0	1	8	72	80	11	*3,300	12	106
185	107,284.5	523.8	1	1	2	1	14	15	2	650	12	107
195	348,360	1,670	1	1	2	0	42	42	9	2,450	7	108
193	132,023	685	2	0	2	2	18	20	3	950	12	109
180	150,840	838	1	0	1	3	14	17	3		12	110
		679					1	13	14	2		111
178	152,245	850	1	0	1	5	12	17	4	1,060	11	112
177	221,958	1,254	1	0	1	5	19	24	5	1,396	12	113
190	95,510	529					5	10	15	2		114
177	170,460	947	1	0	1	4	23	27	4	1,400	12	115
190	314,355	1,655	1	0	1	4	42	46	8	2,200	12	116
182	924,014	5,077	2	2	4	16	144	160	17	7,000	12	117
192	666,624	3,472	3	9	12	3	93	96	13	4,380	12	118
180	183,654	1,020	1	0	1	4	21	25	4	1,400	12	119
180	165,600	920	1	0	1	2	24	26	4	1,200	12	120
194.5	205,781	1,058	1	0	1	1	24	25	3	1,264	11	121
177	111,209	628	1	0	1	2	18	20	4	720	11	122
185	2,191,651	11,846.7	5	6	11	13	292	305	30		12	123
177	307,803	1,739	3	1	4	5	31	36	5		12	124
176	174,288	990				6	18	24	4	1,350	12	125
185	866,485	1,981	3	4	7	4	50	54	8		12	126
190	181,260	954	1	0	1	3	27	30	7	1,200	12	127
181	108,600	600	1	0	1	3	13	16	2	825	11	128
173	273,392	1,580	0	2	2	5	34	39	6	2,010	12	129
		1,400				4	27	31	7			130
180	175,840	978				6	17	23	6	1,000	12	131
192	163,961	854	2	1	3	3	21	24	4	1,074	12	132
180	147,240	818	1	0	1	7	14	21	4	1,150	11	133
185	245,791	1,328.6	1	0	1	2	36	38	7	1,875	12	134
180	441,540	2,453				10	60	70	12			135
183	166,164	908	1	0	1	1	23	24	3	1,000	12	136
177.5	383,220	2,129	3	1	4	3	56	59	9	2,626	14	137
176.5	140,780.5	797.6	1	0	1	2	19	21	4	1,400	11	138
180	178,380	991	2	0	2	4	19	23	3	1,200	13	139
177	411,000	2,322.6	1	0	1	6	51	57	10	2,600	12	140
187	711,740.7	3,806	1	1	2	15	104	119	16	5,117	12	141
177	128,325	725	1	0	1	3	19	22	2	800	12	142
194	156,267	805.5	1	0	1	2	20	22	5	1,065	12	143
190	178,220	938				0	23	23	4			144
167	139,130	834	1	0	1	5	13	18	4	1,060	11	145
173	164,142.4	948.8	1	0	1	0	22	22	3	1,000	12	146
160	104,400	1,160				(22)		22	4	1,600	12	147
193	b 560,629	b 2,853	2	1	3	15	67	82	11	3,776	11	148
180	b 531,000	2,950				1	79	80	16	3,762		149
187	350,999	1,877	1	0	1	1	50	51	10		12	150
176	431,552	2,452	1	0	1	4	73	77	16	3,750	12	151
193	231,600	1,200	1	0	1	4	27	31	8		12	152
196	663,081.7	3,383	2	0	2	10	92	102	10	4,286	13	153
174	412,003.5	2,367.8	1	1	2	2	79	81	9	3,060	12	154
177	488,007	2,767	2	11	13	4	97	101	11	3,587	12	155
197	b 635,148	3,224	9	3	12	10	83	93	13	4,425	12	156

a Including four years' course in the township high school located in Ottawa.
b Estimated.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	IOWA—continued.									
157	Fort Dodge*	4,871	5-21	817	890	1,707	150	533	540	1,073
158	Fort Madison	7,901	5-21	1,168	1,214	2,382	450	530	542	1,072
159	Iowa City	7,016	5-31	1,703	1,868	3,571	600	(1,381)		1,381
160	Keokuk	14,101	5-21	2,260	2,289	4,549	500	1,177	1,153	2,330
161	Le Mars	4,036	5-21	692	711	1,403	200	(977)		977
162	Lyons	5,799	5-21	966	1,008	1,974	300	570	562	1,132
163	Marshalltown	8,916	5-21	1,237	1,328	2,565	70	930	1,019	1,949
164	Mason City*	4,007	5-21	(1,254)		1,254		(1,088)		1,088
165	Muscatine	11,454	5-21	1,552	1,523	3,075	200	(2,039)		2,039
166	Oskaloosa	6,558	5-21	(2,015)		2,015	15	735	843	1,578
167	Ottumwa	14,001	5-21	1,617	1,645	3,262	150	1,269	1,323	2,592
168	Sioux City	37,806	5-21	(8,000)		8,000	300	(4,337)		4,337
169	Waterloo (east side)	6,674	5-21	692	700	1,392	250	435	501	936
	KANSAS.									
170	Atchison	13,963	5-21	2,501	2,682	5,183	900	1,052	1,130	2,182
171	Emporia	7,551	5-21	1,428	1,600	3,028	200	900	990	1,890
172	Fort Scott	11,946	5-21	(3,643)		3,643	70	1,395	1,243	2,638
173	Hutchinson	8,682		1,212	1,358	2,570		1,003	1,088	2,091
174	Junction City	4,502	5-21					(1,168)		1,168
175	Kansas City	38,316	5-21					(5,677)		5,677
176	Lawrence	9,997	5-21	1,814	1,780	3,594	150	1,137	1,195	2,332
177	Leavenworth	19,768	5-21	3,298	3,492	6,790		1,654	1,736	3,390
178	Newton	5,605	5-21	940	1,012	1,952	200	658	724	1,382
179	Ottawa	6,248	5-21					727	820	1,547
180	Parsons	6,736	6-21	(2,224)		2,224	250	(1,750)		1,750
181	Pittsburg	6,697	6-21	(2,132)		2,132	75	690	713	1,403
182	Salina	6,149	5-21	1,043	1,014	2,057	425	633	696	1,329
183	Topeka	31,007	5-21	5,325	5,456	10,781	750	2,803	2,958	5,761
184	Wellington	4,391	5-21	846	885	1,731	100	604	618	1,222
185	Wichita	23,853	5-21	3,648	3,633	7,281	800	2,318	2,486	4,804
186	Winfield	5,184	5-21	985	943	1,928	100	684	681	1,365
	KENTUCKY.									
187	Ashland	4,195	6-21	536	534	1,070	150	332	373	705
188	Bowling Green	7,803	6-21	(2,449)		2,449	125	(1,449)		1,449
189	Covington	37,371	6-21	6,226	6,019	12,245	3,200	(4,018)		4,018
190	Dayton	4,264	6-21	706	665	1,371	150	371	354	725
191	Henderson	8,535	6-21	1,200	1,300	2,500	350	689	710	1,399
192	Hopkinsville	5,833	6-20	910	955	1,865	100	458	502	960
193	Lexington	21,567	6-20	3,722	3,635	7,357	3,080	1,579	2,112	3,691
194	Louisville	161,129	6-20	32,738	34,677	67,415		10,922	11,692	22,614
195	Newport	24,918	6-20	3,901	3,984	7,885	900	1,586	1,687	3,273
196	Owensboro	9,837	6-20	1,245	1,177	2,242	250	750	817	1,567
197	Paducah	12,797					150	(1,979)		1,979
198	Paris*	4,218	6-20	776	759	1,535	200	184	139	323
	LOUISIANA.									
199	New Orleans	242,039						9,905	11,231	21,136
200	Shreveport	11,979	6-18	1,880	2,131	4,011	454	366	356	722
	MAINE.									
201	Auburn	11,250	4-21	1,450	1,750	3,200	125	850	950	1,800
202	Augusta	10,527	4-21	(2,614)		2,614	100	(1,879)		1,879
203	Bangor	19,103	5-21	(5,389)		5,389	300	(3,006)		3,006
204	Bath	8,723	4-21	(2,623)		2,623	20	(1,953)		1,953
205	Belfast*	5,294	4-21	(1,352)		1,352		(1,121)		1,121
206	Biddeford	14,443	4-21	(4,500)		4,500	800	986	885	1,871
207	Brewer	4,193	4-21	(1,093)		1,093		(700)		700
208	Calais	7,290	4-21	1,100	1,400	2,500	100	600	800	1,400
209	Ellsworth*	4,804	4-21	838	881	1,719	0	(1,159)		1,159
210	Gardiner	5,491	4-21	(1,543)		1,543		(901)		901

* Statistics of 1888-89.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
175	137,900	788	3	0	3	2	18	20	7	1,057	.....	157
173	154,835	895	2	0	2	6	19	25	5	1,160	12	158
186.5	190,528	1,021.6	1	0	1	3	30	33	7	1,500	11	159
180	316,080	1,756	5	0	5	0	47	47	7	2,304	12	160
177	123,015	695	1	0	1	0	20	20	3	1,000	11	161
200	a153,000	765	1	0	1	0	20	20	4	1,300	11	162
176	262,436	1,491	3	1	4	5	50	55	7	1,680	12	163
180	136,440	758	.....	.....	.....	(18)		18	.....	.....	.....	164
190	a307,040	1,616	1	0	1	4	45	49	8	2,000	12	165
178	195,662	1,099	1	1	2	1	34	35	5	1,425	12	166
189	336,987	1,783	2	0	2	0	47	47	6	2,200	12	167
179	495,111	2,766	1	2	3	3	90	93	20	.....	12	168
180	120.060	667	1	0	1	1	20	21	4	950	12	169
178	294,902	1,659	1	0	1	7	33	40	7	2,000	12	170
175	249,900	1,428	1	0	1	4	35	39	9	1,600	11	171
160	.....	.....	1	0	1	6	36	42	8	2,176	11	172
173	249,812	1,454	1	2	3	6	31	37	7	1,900	11	173
.....	152,640	848	.....	.....	.....	(17)		17	4	.....	.....	174
.....	.....	.....	1	0	1	19	90	109	17	.....	12	175
168	308,280	1,835	1	0	1	3	32	35	11	1,775	11	176
176	416,416	2,366	1	0	1	8	49	57	9	.....	12	177
177	169,054.5	926	1	0	1	4	20	24	3	1,500	11	178
178	205,234	1,153	1	0	1	3	20	23	3	1,200	11	179
160	252,000	1,575	1	0	1	4	24	28	4	1,580	11	180
180	141,480	786	1	0	1	7	13	20	3	1,140	12	181
180	174,240	968	1	0	1	2	23	25	5	1,210	12	182
175	800,012.5	4,571.5	3	0	3	28	123	95	23	5,850	12	183
180	149,840	838	1	0	1	1	20	21	4	1,200	11	184
176	a560,912	3,187	2	1	3	17	73	90	19	4,625	12	185
170	156,060	918	1	0	1	5	21	26	5	1,200	11	186
160	.....	.....	1	0	1	0	12	12	4	625	.....	187
192	176,164	917	.....	.....	.....	3	20	23	3	1,300	8	188
200	546,000	2,730	1	0	1	(62)		62	6	3,000	12	189
195	103,284	543	0	0	0	1	12	13	2	750	11	190
195.5	199,214.5	1,019	1	0	1	3	27	30	5	1,500	12	191
188	.....	.....	2	0	2	2	17	19	2	950	11	192
200	623,200	3,116	6	2	8	5	45	50	7	2,200	10	193
216	3,491,856	16,166	15	8	23	28	399	427	34	.....	12	194
200	510,756	2,554	1	0	1	4	52	56	9	2,886	11	195
189	177,127	937	1	0	1	3	25	28	4	1,290	10	196
194	.....	.....	1	0	1	10	20	30	7	1,737	11	197
190	35,270	233	0	0	0	1	5	6	1	300	.....	198
180	2,732,580	15,181	.....	.....	.....	24	406	430	.....	.....	.....	199
202	105,242	521	1	0	1	9	10	19	8	1,000	6	200
176	264,000	1,500	1	0	1	5	58	63	33	1,600	13	201
176	180,260	1,076	5	0	5	4	40	44	26	1,758	14	202
180	.....	.....	4	1	5	5	88	93	36	2,800	8	203
204	250,920	1,230	.....	.....	.....	2	35	37	15	2,000	12	204
149	.....	.....	0	0	0	2	24	26	18	.....	.....	205
176	264,000	1,467	2	1	3	7	39	46	22	1,959	14	206
160	.....	.....	.....	.....	.....	1	16	17	11	.....	.....	207
170	.....	.....	.....	.....	.....	2	25	27	13	1,500	14	208
127	97,918	771	0	0	0	7	21	28	23	.....	.....	209
180	.....	.....	.....	.....	.....	2	18	20	12	.....	.....	210

a Estimated.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	MAINE—continued.									
211	Lewiston	21,701	4-21	3,001	3,939	6,940	1,500	1,726	1,254	2,980
212	Portland	36,425	4-21				1,200	3,563	2,604	6,167
213	Rockland	8,174	4-21	870	1,308	2,178	50	523	780	1,303
214	Saco	6,075	4-21	(1,621)		1,621	25	425	450	875
215	Waterville	7,107	4-21	(2,548)		2,548		(1,005)		1,995
	MARYLAND.									
216	Baltimore	434,439	6-21	54,896	55,835	110,731	15,965	(63,545)		63,545
217	Frederick	8,193	6-21	675	700	1,375	300	450	500	950
218	Hagerstown	10,118	6-21				200	(2,186)		2,186
	MASSACHUSETTS.									
219	Adams *a*	9,213	5-15	959	1,003	1,962	25	(1,951)		1,951
220	Amesburg *a*	9,798	5-15	(1,557)		1,557	442	(1,148)		1,148
221	Attleborough	7,577	5-15	590	551	1,141	15	734	728	1,462
222	Beverly *a*	10,821	5-15	(1,767)		1,767	20	(1,775)		1,775
223	Boston	448,477	5-15	(72,041)		72,041	9,936	36,114	32,684	68,798
224	Brockton	27,294	5-15	(3,985)		3,985	500	(3,723)		3,723
225	Brookline	12,103	5-15	(1,976)		1,976	200	(2,164)		2,164
226	Cambridge	70,028	8-14	(7,500)		7,500	2,037	(11,686)		11,686
227	Chelsea	27,909	5-15	(4,891)		4,891	334	2,556	2,375	4,931
228	Chicopee	14,050	5-15	(2,293)		2,293	750	942	861	1,803
229	Clinton	10,424	5-15	(1,972)		1,972	458	(1,621)		1,621
230	Danvers	7,454	5-15	(1,104)		1,104	20	(1,284)		1,284
231	Dedham	7,123	5-15	(1,261)		1,261	150	788	645	1,431
232	Everett	11,068	5-15	(1,847)		1,847	75	(2,002)		2,002
233	Fall River	74,398	5-15	7,108	6,365	13,473	3,000	5,943	5,386	11,329
234	Fitchburg	22,037	5-15	(3,912)		3,912	800	1,885	1,825	3,710
235	Framingham	9,239	5-15	(1,692)		1,692	141	(2,009)		2,009
236	Gardner	8,424	8-14	(724)		724	160	(1,321)		1,321
237	Gloucester	24,651	8-14	1,129	1,140	2,269	350	2,095	2,042	4,137
238	Haverhill	27,412	5-15	(4,101)		4,101	950	(3,469)		3,469
239	Holyoke	35,637	5-15	3,489	3,287	6,776	3,136	2,570	2,228	4,798
240	Hyde Park	10,193	5-15	965	937	1,902	513	(1,805)		1,805
241	Lawrence	44,654	5-15	4,131	4,162	8,293	1,500	(6,286)		6,285
242	Lowell	77,696	5-15	(11,989)		11,989	3,500	5,710	5,439	11,149
243	Lynn	55,727	5-15	4,053	3,858	7,911	750	4,403	4,129	8,532
244	Malden	23,031	5-15	1,790	1,816	3,606	670	1,597	1,656	3,253
245	Marblehead	8,202	5-15	(1,267)		1,267	40	(1,334)		1,334
246	Marlboro	13,805	5-15	(2,397)		2,397	400	(2,380)		2,380
247	Medford	11,079	5-15	801	818	1,619	25	1,092	1,094	2,186
248	Melrose	8,519	5-15	(1,303)		1,303	0	(1,500)		1,500
249	Milford	8,780	5-15	664	725	1,389	260	828	684	1,512
250	Natick	9,118	5-15	(1,682)		1,682	27	(1,950)		1,950
251	New Bedford	40,733	8-14	(3,999)		3,999	1,688	(5,696)		5,696
252	Newburyport	13,947	5-15	(2,492)		2,492	800	873	864	1,737
253	Newton	24,379	5-15	(4,202)		4,202	163	2,125	2,158	4,283
254	North Adams	16,074	5-15	(3,091)		3,091	500	1,358	1,273	2,631
255	Northampton	14,090	5-15	(2,400)		2,400	250	1,219	1,290	2,509
256	Peabody	10,158	5-15	(1,921)		1,921	0	1,023	979	2,001
257	Pittsfield	17,281	5-15	1,500	1,612	3,112	300	1,600	1,766	3,366
258	Plymouth	7,314	5-15	690	735	1,425	30	753	791	1,544
259	Quincy*	16,723	5-15	(3,296)		3,296	45	(3,119)		3,119
260	Salem	30,801	5-15	2,572	2,588	5,160	1,364	2,498	1,754	4,252
261	Somerville	40,152	5-15	(6,135)		6,135	670	4,067	3,690	7,757
262	Southbridge	7,655	5-15	775	817	1,592	521	599	622	1,221
263	Spencer	8,747	5-15	(2,056)		2,056	40	(2,165)		2,165
264	Springfield	44,179	5-15	(7,054)		7,054	1,830	2,901	3,365	6,266
265	Stoneham	6,155	5-15	444	448	892	0	510	519	1,029
266	Taunton	25,448	8-14	(2,343)		2,343	137	2,292	2,137	4,429
267	Waltham	18,707	5-15	(2,759)		2,759	982	1,076	1,089	2,165

* Statistics of 1888-89.
a This report includes the entire town.
b Some schools were in session but 180 days.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
180	327,680	1,876	1	0	1	4	64	68	21	2,600	14	211
186	868,062	4,667	5	1	6	6	155	161	18	7,000	13	212
160	186,400	1,165	1	1	2	4	27	31	11	1,550	14	213
181			1	0	1	7	22	29	16		14	214
185			1	0	1	2	26	28	10			215
193	7,722,702	40,014	4	5	9	112	1,068	1,180	103	55,000	13	216
174	135,720	780	1	0	1	4	16	20	5	1,000	7	217
152	208,392	1,371	1	0	1	8	29	37	7	2,400	10	218
*b*195	*c*266,251	1,471	1	0	1	4	38	42	9	2,014	13	219
180	*c*126,000	700				(28)		28			13	220
175	173,630	970	2	2	4	2	32	34	14	1,440	12	221
190	264,480	1,392	0	0	0	3	39	42	9	1,820	11	222
190	10,216,300	53,770	6	1	7	203	1,169	1,372	183		*d*12	223
200	*c*332,000	3,160	1	0	1	7	83	90	26	*c*4,000	13	224
200	*c*310,000	1,550	3	4	7	6	*43	*49	12		14	225
200	1,865,080	9,162.4	4	3	7	21	242	263	38		15	226
200	707,800	3,539	1	0	1	7	85	92	11	4,931	13	227
192	*c*199,622.4	1,039.7	2	1	3	4	29	33	6			228
196	234,024	1,194	1	1	2	1	32	33	11		12	229
185	183,150	990				4	24	28	11	1,300	12	230
189	*c*205,632	1,088	2	1	3	4	32	36	13	1,434	13	231
189	250,141	1,346	0	0	0	2	36	38	6	2,029	13	232
195	1,433,445	7,351	2	2	4	14	221	235	41	10,667	13	233
187	497,897	2,662.5	1	0	1	7	71	78	22	3,450	13	234
190	280,440*c*	1,476	1	0	1	3	39	42				235
195	184,080	944	0	0	0	1	27	28	10	1,519	13	236
191	671,365	3,515	4	1	5	2	98	100	23	4,620	13	237
200	508,200	2,541	3	1	4	5	88	93	28		13	238
197.6	596,781.6	3,091	9	7	16	3	84	87	15	3,174	13	239
198	*c*239,896.8	1,211.6	0	0	0	8	33	41	6	2,000	12	240
200	1,006,800	5,034	3	0	3	6	128	134	20	6,000	13	241
195	1,431,105	7,339	13	1	14	0	189	189	45		13	242
189.5	1,293,951	7,265	8	3	11	12	158	170	32	8,550	13	243
191	512,071	2,681	3	1	4	6	82	88	13	4,165	13	244
200	206,800	1,034	2	0	2	3	26	29	11	1,288	13	245
175	336,350	1,922	1	1	2	2	52	54	9	2,400	13	246
193	303,889	1,574.5	1	0	1	(46)		46	12	2,200	13	247
190	234,220*c*	1,238				1	30	31				248
172	202,272	1,176	1	1	2	1	35	36	17	2,192	13	249
180	274,440*c*	1,508				3	43	46				250
195	787,615	3,925	1	1	2	7	23	30	25		13	251
200	250,000	1,250	1	0	1	5	33	38	12	1,766	13	252
195	696,150	3,570	1	0	1	17	89	106	22	4,712	13	253
190	369,740	1,946	1	2	3	2	59	61	11	3,000	13	254
*e*190	363,708	1,908	1	1	2	4	67	71	25	2,700	13	255
200	*c*321,200	1,606	0	0	0	5	39	44	8	2,310	13	256
195	*c*450,411	2,309.8	2	1	3	7	80	87	24	3,296	13	257
200	237,400	1,187	1	0	1	4	34	38	27	1,600	10	258
200	*c*437,600	2,368	2	1	3	6	53	59	8			259
205	681,625	3,325	0	0	0	8	94	102	16	4,661	13	260
192	1,072,396.8	5,586.4	2	3	5	10	128	138	25	6,827	13	261
193	131,525.9	720.7	1	0	1	1	22	23	11	869	14	262
180	277,900	1,545	1	0	1	5	45	50	17	1,848	9	263
188	*c*904,956.8	4,813.6	5	4	9	0	144	144	31	6,250	13	264
184	*c*142,784	776	2	1	3	2	24	26	7	1,200	13	265
200	665,400	3,327	1	0	1	10	91	101	33	4,737	13	266
192	23,580	1,065	3	1	4	5	57	62	14	2,540	13	267

c Estimated.
d Not including the kindergarten course.
e The Center High School was in session 200 days, and the Florence High School 195 days.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	MASSACHUSETTS—con.									
268	Watertown	7,073	5-15	(1,185)		1,185	410	(917)		917
269	Westfield	9,805	5-15	(1,548)		1,548	20	(1,789)		1,789
270	Weymouth	10,866	5-15	965	898	1,863	12	(2,200)		2,200
271	Woburn	13,499	8-14	732	817	1,549	500	1,458	1,071	2,529
272	Worcester	84,655	5-15	(14,437)		14,437	2,500	7,605	6,906	14,511
	MICHIGAN.									
273	Adrian	8,756	5-20	(2,482)		2,482	230	666	714	1,380
274	Alpena	11,283	5-20	(3,627)		3,627	700	(1,549)		1,549
275	Ann Arbor	9,431	5-20	1,473	1,533	3,006	300	1,032	943	1,975
276	Au Sable	4,328	5-20	(1,310)		1,310	500	(553)		553
277	Battle Creek	13,197	5-20	(3,671)		3,671	500	(2,150)		2,150
278	Bay City	27,839	5-20	4,531	4,578	9,109	2,000	2,083	2,105	4,188
279	Big Rapids	5,303	5-20	900	850	1,750	200	600	800	1,400
280	Cadillac	4,461	5-20	(1,216)		1,216		(1,049)		1,049
281	Cheboygan	6,235	5-20	(1,698)		1,698	350	(1,030)		1,030
282	Coldwater	5,247	5-20	627	635	1,262	0	545	611	1,156
283	Detroit	205,876	5-20	(63,009)		63,009	11,945	(23,916)		23,916
284	East Saginaw	(c)	5-20	4,930	5,097	10,027	1,000	2,433	2,394	4,827
285	Escanaba	6,808	5-20	940	1,086	2,027	748	395	406	801
286	Flint	9,803	5-20	(2,449)		2,449	250	(1,852)		1,852
287	Grand Haven	5,023	5-20	(2,016)		2,016	25	(1,302)		1,302
288	Grand Rapids	60,278	5-20	(15,602)		15,602	2,200	(10,752)		10,752
289	Ionia	4,482	5-20	(1,336)		1,336	250	530	537	1,067
290	Iron Mountain*	8,599	5-20	(1,424)		1,424		(1,224)		1,224
291	Ironwood	7,745	5-20	(1,398)		1,398		(965)		965
292	Ishpeming	11,197	5-18	1,237	1,327	2,564		848	873	1,721
293	Jackson, dist. No. 1.	20,798	5-20	(2,862)		2,862	400	999	1,110	2,109
294	Jackson, dist. No. 17.		5-20	(2,627)		2,627		(1,542)		1,542
295	Kalamazoo	17,853	5-20	2,620	2,834	5,454	500	1,577	1,712	3,289
296	Lansing	13,102	5-20	(3,708)		3,708		(1,994)		1,994
297	Ludington	7,517	5-20				75	941	914	1,855
298	Manistee*	12,812	5-20	(3,878)		3,878		(3,023)		3,023
299	Marquette	9,093	5-20	(2,486)		2,486	300	701	694	1,395
300	Menominee	10,630	5-20	(2,520)		2,520	400	803	775	1,578
301	Monroe*	5,358	5-20	(2,009)		2,009		(619)		619
302	Mount Clemens	4,748	5-20	(1,500)		1,500	300	(1,019)		1,019
303	Muskegon	22,702	5-20	3,930	3,851	7,781	1,000	2,571	2,600	5,171
304	Negaunee	6,078	5-20	825	955	1,780	300	500	510	1,010
305	Niles	4,197	5-20	603	623	1,226	125	400	443	843
306	Owosso	6,564	5-20	(1,707)		1,707	100	(1,425)		1,425
307	Pontiac	6,200	5-20	637	652	1,289		607	621	1,228
308	Port Huron	13,543	5-20	2,136	2,238	4,374	700	1,132	1,102	2,234
309	Saginaw	c46,322	5-20	(5,661)		5,661		(3,139)		3,139
310	Sault Ste. Marie	5,760	5-20	756	820	1,576	250	621	549	1,170
311	Traverse City	4,353	5-20	(1,222)		1,222		(948)		948
312	West Bay City	12,981	5-21	(3,762)		3,762	200	1,414	1,423	2,837
313	Ypsilanti	6,129	5-21	(1,740)		1,740	300	475	465	940
	MINNESOTA.									
314	Anoka	4,252	5-20	(1,264)		1,264	50	419	474	893
315	Brainerd	5,703					*25	(1,218)		1,218
316	Duluth	33,115					600	(3,197)		3,197
317	Faribault	6,520					600	(987)		987
318	Mankato	8,838	6-21				500	(1,310)		1,310
319	Minneapolis	164,738	5-21	(56,700)		56,700	2,500	10,270	10,322	20,592
320	Red Wing	6,294	5-21	b950	b850	b1,800	125	723	788	1,511
321	Rochester	5,321						475	499	974
322	St. Cloud	7,686	5-21	1,097	1,103	2,200	575	(939)		939
323	St. Paul	133,156					5,710	7,352	7,452	14,804
324	Stillwater	11,260					300	957	792	1,749
325	Winona	18,208	5-21				700	(2,930)		2,930

*Statistics of 1888-89.

a Grades X to XIII were in session 200 days.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
197	137,506	698	1	0	1	5	26	31	8		13	268
a 180	b250,960	1,379	2	0	2	5	38	43	20		13	269
195	344,312	1,784	2	0	2	6	50	56	20	2,550	13	270
181	365,625	1,875	1	0	1	9	46	55	13	2,250	13	271
	1,849,296	10,216	1	0	1	28	278	306	48	13,916	14	272
195	186,069	964	1	0	1	2	29	31	5	1,780	12	273
196	207,274.5	1,058	1	1	2	3	26	29	9	1,200	12	274
192	305,472	1,591	2	2	4	8	41	49	7	1,750	12	275
196	73,421	347	1	0	1	1	10	11	3	600	12	276
191			1	1	2	2	46	48	7	2,200	13	277
195	507,214.5	2,917	2	2	4	2	83	85	10		12.5	278
195	148,788	875	1	0	1	1	24	25	5	1,200	12	279
196	126,380.8	644.8	1	1	2	2	21	23	5	850	12	280
194	108,126	557.4	1	0	1	5	12	17	7	750	11	281
196.5	163,781	831	1	0	1	3	20	23	4	1,100	12	282
200	3,529,080	17,646	13	18	31	0	485	485	50	22,239	12	283
196	686,637	3,503	2	2	4	8	101	109	13	4,535	12	284
195	96,915	497	0	0	0	1	11	12	3	650	12	285
195	277,165	1,407	1	0	1	2	37	39	7	1,905	12	286
195	194,851	973	1	1	2	2	23	25	7	1,325	12	287
194	1,450,514	7,476	2	2	4	7	220	227	23	10,361	12	288
195	154,817	775	1	1	2	3	21	24	4	1,015	12.5	289
200	127,200	636	1	0	1	1	16	17				290
200	b102,600	513	0	0	0	2	10	12				291
196	202,468	1,033				1	22	23	4	1,250	12	292
193	280,140	1,451.5	1	2	3	2	40	42	8	1,800	12	293
196	217,364	1,109	1	0	1	2	20	22	8	1,250		294
189.5	487,810.5	2,439	1	2	3	1	66	67	9	2,875	12	295
187	b 243,100	b 1,300	2	0	2	5	41	46	8	1,807	12	296
183.5	249,009	1,357	1	0	1	1	33	34	6	1,800	13	297
197	282,151	1,483	2	0	2	7	41	48				298
195.5	200,253	1,024	1	1	2	1	21	22	5	1,236	12	299
196	196,744	966	1	0	1	1	27	28	6	1,232	12	300
194	81,092	418	0	0	0	1	11	12				301
200	106,000	530	1	0	1	2	12	14	3		12	302
200	655,621	3,265	3	2	5	8	93	101	16	4,100	12	303
192	123,823	650	1	1	2	1	20	21	4	1,000	12	304
187	118,038	644	1	0	1	2	17	19	5	854	12	305
192	204,480	1,065	1	0	1	4	23	27	5	1,346	12	306
195	166,563	854	2	0	2	2	20	22	6	1,023	12	307
195	281,277.5	1,573	1	0	1	1	39	40	8	2,000	12	308
200	407,800	2,039	1	0	1	(59)		59	9	3,600	12	309
200		579	1	0	1	1	15	16	6	763	12	310
180	b117,000	650	1	0	1	1	20	21				311
193.5	337,781.5	1,786	1	1	2	5	46	51	10	2,100	12	312
200	126,668	631	1	0	1	5	18	23	4	1,000	12	313
177	119,408	663.6	1	0	1	1	18	19	5	850	12	314
170	136,510	803	1	0	1	3	19	22	5	900	12	315
190	b406,410	2,139	1	2	3	3	72	75	12	3,300	12	316
175	122,965	702	1	0	1	2	19	21	7	850	11	317
180	176,400	980	1	0	1	3	22	25	5	1,109	12	318
183	2,782,616	15,282.5	8	38	46	19	490	509	46	19,100	12	319
177	198,240	1,120	1	0	1	1	25	26	5	1,350	12	320
186	139,106	757	1	1	2	0	22	22	4	1,000	12	321
178	113,742	639	1	1	2	2	19	21	6	800	11	322
186	1,997,344	10,854	14	18	32	38	363	401	41	20,530	11	323
176	241,296	1,371	2	1	3	4	39	43	7	1,500	13	324
200	423,684	2,134	1	2	3	3	57	60	9	3,000	12	325

b Estimated.

c The population of East Saginaw is included in that reported for Saginaw.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	MISSISSIPPI.									
326	Columbus	4,559	5-21	*841	*1,077	*1,918	30	551	650	1,201
327	Greenville*	6,658	5-21	477	525	1,002	.....	439	466	905
328	Jackson*	5,920	5-21	873	925	1,798	160	485	517	1,002
329	Meridian	10,624	5-21	.....	.....	.....	*600	*(1,496)		*1,496
330	Natchez	10,101	6-21	*1,862	*1,898	*3,760	*530	667	731	1,398
331	Vicksburg	13,373	5-21	3,131	3,372	6,503	800	610	856	1,466
	MISSOURI.									
332	Boonville	4,141	6-20	650	663	1,313	125	281	250	481
333	Brookfield	4,547	6-20	694	684	1,378	270	374	482	856
334	Cape Girardeau*	4,297	6-20	889	926	1,815	.....	361	391	752
335	Carthage	7,981	6-20	1,094	1,216	2,310	100	808	976	1,784
336	Chillicothe	5,717	6-20	749	780	1,529	250	560	500	1,060
337	Clinton	4,737	6-20	873	970	1,843	125	647	666	1,313
338	Columbus	4,000	6-20	603	702	1,305	150	390	384	774
339	Fulton	4,314	6-20	549	606	1,155	.....	366	392	758
340	Hannibal	12,857	6-20	1,985	2,050	4,035	300	1,163	1,275	2,438
341	Independence	6,380	6-20	846	996	1,842	200	620	727	1,347
342	Jefferson City*	6,742	6-20	1,128	1,193	2,321	.....	467	510	977
343	Joplin*	9,943	6-20	700	783	1,483	.....	605	663	1,268
344	Kansas City	132,716	6-20	20,380	22,540	42,920	.....	8,675	9,097	17,772
345	Lexington	4,537	6-20	961	941	1,902	300	359	431	790
346	Louisiana	5,000	6-20	765	766	1,531	300	476	478	954
347	Marshall	4,297	6-20	743	742	1,485	200	678	450	1,128
348	Maryville	4,057	6-20	600	700	1,300	48	400	650	1,050
349	Mexico	4,789	6-20	813	859	1,672	50	638	637	1,275
350	Moberly	8,215	6-20	1,965	1,912	2,877	500	819	852	1,681
351	Nevada	7,262	6-20	1,041	1,085	2,126	225	796	781	1,577
352	Rich Hill	4,008	6-21	715	712	1,427	40	560	570	1,130
353	St. Charles*	6,161	6-20	937	986	1,923	1,262	221	240	461
354	St. Joseph	52,324	6-20	10,361	11,050	21,411	1,000	3,296	3,517	6,813
355	St. Louis	451,770	6-20	55,056	53,398	108,454	25,000	28,402	29,907	58,316
356	Springfield	21,850	6-20	3,062	3,190	6,252	000	2,220	2,292	4,512
357	Trenton	5,039	6-20	684	748	1,432	*130	562	627	1,189
358	Warrensburg	4,706	5-20	734	767	1,501	.....	556	851	1,119
	MONTANA.									
359	Butte City	10,723	4-21	1,923	1,956	3,881	437	1,093	1,106	2,199
360	Helena	13,834	4-21	.....	.....	2,634	300	742	853	1,595
	NEBRASKA.									
361	Beatrice	13,836	5-21	1,220	1,261	2,481	150	931	961	1,892
362	Fremont	6,747	5-21	(1,900)		1,900	250	659	791	1,450
363	Grand Island	7,536	5-21	1,069	1,237	2,306	75	864	908	1,772
364	Hastings	13,584	5-21	1,057	1,146	2,203	100	755	795	1,550
365	Kearney	8,074	5-21	1,290	1,128	2,418	20	828	835	1,663
366	Lincoln	55,154	5-21	4,944	4,784	9,728	300	2,658	2,701	5,359
367	Nebraska City	11,494	5-21	1,086	1,135	2,221	300	646	695	1,341
368	Omaha	140,452	5-21	9,963	10,280	20,243	1,900	6,402	6,877	13,279
369	Plattsmouth*	8,332	5-21	949	965	1,914	150	(1,261)		1,261
370	South Omaha	8,062	5-21	(2,048)		2,048	200	(1,245)		1,245
	NEVADA.									
371	Virginia City*	8,511	6-18	887	878	1,765	500	760	682	1,442
	NEW HAMPSHIRE.									
372	Concord	17,004	.....	.....	.....	.....	350	1,138	1,214	2,352
373	Dover	12,790	5-15	1,065	1,075	2,140	600	746	775	1,521
374	Keene	7,446	4-14	681	551	1,232	325	520	432	952
375	Manchester	44,126	5-21	.....	.....	.....	3,700	1,862	1,925	3,787

*Statistics of 1888-89.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
180	a131,220	*729	1	0	1	5	13	18	5	1,250	10	326
169	112,009	709	0	0	0	3	13	16	2	----------	------	327
180	156,600	870	0	0	0	3	15	18	3	----------	10	328
173	a167,291	*967	1	0	1	1	30	31	4	3,600	11	329
180	146,889	816	2	0	2	2	25	27	2	1,400	7	330
187	224,796	1,213	1	0	1	2	27	25	6	1,765	11	331
180	52,200	290	1	0	1	2	10	12	1	450	10	332
178	128,694	723	1	1	1	2	7	11	2	480	4	333
175	74,060	510	----------	----------	----------	2	8	10	2	700	------	334
155	213,590	1,378	1	0	1	5	29	34	7	1,700	12	335
158	108,630	692	1	0	1	4	15	19	3	1,200	12	336
180	151,117	839.5	1	0	1	2	18	20	2	1,170	11	337
157	85,295	542	1	0	1	2	13	15	2	600	10	338
160	83,200	520	1	0	1	5	7	12	4	720	------	339
178	299,810	169.5	1	0	1	4	41	45	6	2,050	12	340
173.5	147,589	850.6	----------	----------	----------	2	18	20	3	1,050	10	341
157	112,542	722	----------	----------	----------	3	15	18	3	1,000	------	342
156	113,424	727	0	0	0	6	20	26	5	900	------	343
180	1,989,000	11,050	2	0	2	39	247	286	33	15,687	11	344
181	97,380	538	1	0	1	2	13	15	4	650	10	345
158	102,429	646.4	1	0	1	2	11	13	2	920	12	346
179	145,563.5	813	1	0	1	7	16	23	3	1,216	11	347
179	152,150	850	6	0	6	2	14	16	3	1,100	11	348
189	137,794	766	1	0	1	5	16	21	2	1,240	11	349
158	190,160	1,203	1	0	1	2	23	25	4	1,320	12	350
177	194,563	1,099	----------	----------	----------	4	23	27	4	1,456	12	351
158	110,600	709	1	0	1	4	15	19	4	1,100	------	352
197	76,412	394	1	0	1	3	7	10	3	510	------	353
192	902,880	4,560	1	0	1	14	118	132	22	6,221	12	354
94	7,059,040	41,159	41	17	58	33	1,063	1,096	110	55,680	12	355
160	448,348	2,816	1	0	1	2	48	50	9	2,500	12	356
156	138,510	845	1	0	1	3	16	19	2	1,078	12	357
180	126,052	7,08.2	1	0	1	3	12	15	4	622	------	358
189	264,512	1,309.6	1	0	1	4	33	37	14	1,900	12	359
172	175,608	1,012	1	2	3	1	29	30	9	1,350	12	360
175	201,987	1,158	2	0	2	5	26	31	8	1,292	11	361
187	175,544.4	938.7	1	0	1	1	28	29	8	1,900	11	362
198	235,097	1,202	1	0	1	6	28	34	5	1,672	12	363
180	187,243.5	1,040	1	0	1	0	27	27	5	1,100	12	364
175	174,374	996.4	1	0	1	2	*25	*27	9	1,000	11	365
178	690,284	3,878	1	2	3	2	84	86	19	4,400	11	366
167	172,010	1,030	4	0	4	*5	*22	*27	8	1,400	12	367
198	1,755,258	9,095	1	12	13	6	263	269	38	10,855	12	368
189	150,660	837	----------	----------	----------	1	23	24	8	1,150	------	369
200	122,400	612	1	2	3	1	20	21	6	----------	------	370
198	205,246.8	1,036.6	3	0	3	2	20	22	4	1,550	------	371
----------	----------	1,986	8	1	9	2	36	38	12	2,172	13	372
167	192,557	1,145	1	2	3	2	38	40	19	1,550	9	373
180	160,580	891	----------	----------	----------	2	22	25	8	----------	11	374
176	449,256	2,581	2	1	3	7	68	75	23	3,600	13	375

a Estimated.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	NEW HAMPSHIRE—continued.									
376	Nashua	19,311	5-15	1,252	1,305	2,557	1,050	(2,347)		2,347
377	Portsmouth	9,827	5-15	817	789	1,606	350	627	605	1,232
378	Rochester	a6,100	5-17	521	592	1,113	118	497	564	1,061
	NEW JERSEY.									
379	Atlantic City	13,055	5-18	(2,943)		2,943	250	(1,950)		1,950
380	Bayonne	19,033	5-18	(4,462)		4,462	250	1,361	1,596	2,957
381	Bordentown	4,232	5-18	(1,503)		1,503	250	(652)		652
382	Bridgeton*	11,424	5-18	(2,720)		2,720	300	(1,782)		1,782
383	Burlington	7,264	5-18	(1,834)		1,834	400	(1,007)		1,007
384	Camden	58,313	5-18	(15,656)		15,656	1,800	4,762	6,761	11,523
385	Elizabeth	37,764	5-18	(9,174)		9,174	2,263	(4,420)		4,420
386	Gloucester City	6,564	5-18	892	914	1,806	500	(*976)		*976
387	Hackensack	6,004	5-18	(1,382)		1,382	131	(1,105)		1,105
388	Harrison	8,338	5-18	1,100	1,296	2,396	1,000	500	400	900
389	Hoboken	43,648	5-18	(14,660)		14,660	*1,510	(6,388)		6,388
390	Jersey City	163,003	5-18	(65,211)		65,211	6,389	(23,036)		23,036
391	Lambertville*	4,142	5-18	(976)		976	300	(503)		503
392	Long Branch*	7,231	5-18	(3,279)		3,279	100	(1,797		1,797
393	Millville	10,002	5-18	(2,402)		2,402	40	(1,833)		1,833
394	Norristown	8,156	5-18	1,050	1,113	2,163	600	494	482	976
395	New Brunswick	18,603	5-18	2,316	2,319	4,635	1,220	925	1,042	1,967
396	Newark	181,830	5-18	(55,527)		55,527	8,328	12,421	12,716	25,137
397	Orange	18,844	5-18	(5,238)		5,238	1,800	(1,964)		1,964
398	Passaic	13,028	5-18	1,510	1,491	3,001	500	1,035	1,021	2,056
399	Paterson	78,347	5-18	(20,725)		20,725	3,000	(12,503)		12,503
400	Perth Amboy*	9,512	5-18	(1,768)		1,768	360	(703)		703
401	Phillipsburg	8,644	5-18	1,364	1,309	2,673	400	802	743	1,545
402	Plainfield	11,267	5-18	(2,674)		2,674	*600	876	771	1,647
403	Rahway*	7,105	5-18	(1,779)		1,779	250	(1,163)		1,163
404	Red Bank*	4,145	5-18	(1,051)		1,051	100	(728)		728
405	Salem	5,516	5-18	712	739	1,451	170	(1,065)		1,065
406	South Amboy*	4,330	5-18	(1,208)		1,208	324	(327)		327
407	Trenton	57,458	5-18	7,113	7,189	14,302	2,200	3,368	3,567	6,935
408	Union*	10,643	5-18	(2,804)		2,804	400	(1,770)		1,770
	NEW MEXICO.									
409	Santa Fe	6,185	5-20	895	741	1,636	540	243	155	398
	NEW YORK.									
410	Albany	94,923	5-21	(36,000)		36,000	5,000	7,179	7,210	14,389
411	Albion	4,586	5-21	600	822	1,422	190	361	489	850
412	Amsterdam	17,333	5-21	(5,223)		5,223	660	(2,254)		2,254
413	Auburn	25,858	5-21	3,340	3,364	6,704	1,200	1,746	1,788	3,534
414	Batavia	7,221	5-21	1,119	1,194	2,313	300	599	577	1,176
415	Binghamton	35,005	5-21	3,297	4,347	7,644	562	2,341	2,422	4,763
416	Brooklyn	806,343						(112,461)		112,461
417	Buffalo	255,664	5-21	(82,000)		82,000	13,529	17,111	17,551	34,662
418	Canandalgua	5,868	5-21	(1,712)		1,712	400	459	468	927
419	Catskill	4,920	5-21	(1,220)		1,220	10	420	509	929
420	Cohoes	22,509	5-21	(9,103)		9,103	1,235	1,362	1,257	2,619
421	Cortland	8,590	5-21	1,062	1,101	2,163	90	497	443	940
422	Dunkirk	9,416	5-21	(3,160)		3,160	548	(1,315)		1,315
423	Edgewater	14,265	5-21	400	360	760	30			
424	Elmira	30,893	5-21	3,581	3,547	7,128	666	2,357	2,272	4,629
425	Flushing	8,436	5-21	(2,803)		2,803	500	(1,015)		1,015
426	Fulton	4,214	5-21	678	689	1,367		548	691	1,239
427	Geneva	7,557	5-21	927	1,109	2,036	437	520	640	1,160
428	Gloversville	13,864	5-21	(3,353)		3,353	29	1,229	1,278	2,507
429	Green Island	4,463	5-21	693	754	1,447	19	473	506	979
430	Haverstraw*	5,070					400			
431	Hoosick Falls	7,014	5-21	(1,735)		1,735		567	609	1,176
432	Hornellsville	10,996	5-21	1,615	1,623	3,238	206	1,114	1,179	2,293

* Statistics of 1888-89.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
165	252,780	1,532	13	1	3	3	57	60	17	------	2	376
193	177,174	918	13	3	6	4	26	30	11	1,330	3	377
170	150,280	884	10	0	1	2	22	24	9	1,093	1	378
190	261,250	1,375	12	0	2	0	35	35	4	1,840	2	379
206	215,888	1,048	------	1	6	5	49	54	6	2,096	5	380
200	80,400	402	12	0	0	2	11	13	2	764	0	381
190	224,960	1,184	------	------	------	3	29	32	4	1,739	------	382
200	113,000	565	------	------	------	1	16	17	6	986	------	383
188	a1,061,934	*5,648	6	0	6	1	181	182	18	9,000	7	384
197	605,578	3,074	5	2	7	0	71	71	7	3,346	13	385
215	a110,725	515	------	------	------	1	9	10	4	730	4	386
205	152,725	745	1	0	1	5	14	19	3	1,240	12	387
200	a108,000	a540	------	------	------	3	9	12	1	500	8	388
*200	a886,400	4,427	2	1	3	(120)		120	5	*4,868	13	389
197	2,915,994	14,802	15	16	31	2	371	373	24	15,801	12	390
190	62,890	331	------	------	------	1	13	14	3	638	------	391
189	223,587	1,183	2	1	3	5	25	30	7	1,800	------	392
215	267,245	1,243	0	0	0	5	36	41	11	1,797	12	393
200	147,800	739	1	1	2	1	20	21	2	950	12	394
194	373,944	1,876	------	------	------	3	51	54	6	2,184	12	395
192	3,263,040	16,995	26	6	32	9	402	411	42	22,613	14	396
203	261,261	1,287	1	3	4	3	40	43	5	1,843	13	397
200	283,000	1,415	1	0	1	0	37	37	6	1,781	10	398
200	a1,643,000	8,715	16	3	19	16	204	220	16	9,178	12	399
204	88,128	432	------	------	------	1	9	10	1	500	------	400
197	243,886	1,238	1	0	1	2	29	31	6	1,584	12	401
198	235,977.5	1,210.9	2	1	3	1	36	37	5	1,707	14	402
190	145,920	768	------	------	------	4	17	21	4	1,175	------	403
200	a96,800	484	------	------	------	1	13	14	------	550	------	404
207	a40,158	194	1	2	3	4	20	24	6	1,108	12	405
200	135,640	678.2	------	------	------	1	9	10	------	624	------	406
198	931,590	4,705	5	0	5	1	131	132	24	6,127	13	407
210	a261,870	1,247	------	------	------	3	28	31	------	1,378	------	408
150	45,300	302	------	------	------	4	5	9	3	450	------	409
191	1,950,293	10,264	14	8	22	24	255	279	23	12,953	13	410
196	104,578	546	1	0	1	1	17	18	6	950	12	411
200	274,529	1,372	2	0	2	1	33	34	5	1,400	11	412
189	495,168	2,620	1	2	3	5	95	100	13	4,260	12	413
195	160,283	822	1	0	1	0	20	20	5	1,074	12	414
197	695,622	3,520	1	1	2	6	95	101	9	4,812	12	415
200	15,107,443	73,935	73	112	185	28	1,727	1,755	93	88,675	10.5	416
195	4,286,955	22,029	21	2	23	30	705	735	51	------	13	417
196	118,807	606	1	1	2	1	24	25	6	1,000	13	418
203	124,149	607	1	0	1	3	14	17	2	775	11	419
200	347,879	1,739.3	1	0	1	1	54	55	12	------	12	420
191	118,744	621.7	1	0	1	0	18	18	6	850	8	421
194	185,748	957	2	13	15	2	40	42	9	------	13	422
			1	0	1	1	7	8	1	400	11	423
197	631,206	3,255	1	0	1	5	93	98	9	3,320	12	424
195	139,111	713	1	0	1	1	20	21	2	950	11	425
190	139,876	736	1	0	1	1	19	20	3	850	13	426
160	136,930	856	2	0	2	2	21	23	4	1,034	13	427
191	328,699	1,720	1	1	2	2	36	38	6	2,118	11	428
202	109,897	544	------	------	------	------	------	------	2	800	9	429
												430
185	170,722	923	1	0	1	4	23	27	3	1,250	9	431
196	291,988	1,446	2	4	6	1	39	40	4	1,850	11	432

a Estimated.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	NEW YORK—cont'd.									
433	Hudson	9,970	5-21	1,906	1,694	3,700	450	691	635	1,326
434	Ilion	4,057	5-21							
435	Ithaca	11,079	5-21	(2,733)		2,733	350	881	1,007	1,888
436	Jamestown	16,038	5-21	(4,519)		4,519	282	1,358	1,371	2,721
437	Johnstown	7,768	5-21	1,025	1,118	2,143		718	745	1,463
438	Kingston, Dist. No. 5	21,261	5-21	1,448	1,452	2,900	211	842	906	1,748
439	Lansingburg	10,550	5-21	(3,326)		3,326	430	872	834	1,706
440	Little Falls	8,783	5-21	(2,476)		2,476	150	659	694	1,353
441	Lockport	16,038	5-21				800	(2,730)		2,730
442	Long Island City	30,506	4-21	(9,500)		9,500	90	(6,403)		6,403
443	Lyons	4,475						411	490	901
444	Malone	4,986	5-21	(2,038)		2,038				
445	Matteawan*	4,278	5-21	(1,087)		1,087	200	327	385	712
446	Medina	4,492	5-21	637	680	1,317		573	607	1,180
447	Middletown	11,977	5-21	(3,357)		3,357	305	989	962	1,951
448	Mount Vernon	10,830	5-21	(2,363)		2,363	80	697	766	1,463
449	New Brighton*	16,423	5-21	(3,958)		3,958	70	(2,057)		2,057
450	New Rochelle	8,217	5-21	(2,706)		2,706	239			
451	New York	1,515,301	5-21	242,000	237,000	479,000	65,000	109,797	102,505	212,302
452	Newburg	23,087	5-21	(7,021)		7,021	1,384	(3,437)		3,437
453	Niagara Falls	5,502	5-21	(1,583)		1,583	225	303	436	739
454	Norwich	5,212	5-21	*585	*750	*1,336		(894)		894
455	Ogdensburg	11,662	5-21	(3,850)		3,850	800	943	869	1,812
456	Olean	7,358	5-21	(2,708)		2,708	30	1,039	1,169	2,208
457	Owego	21,842	5-21	3,839	3,904	7,743	1,187	1,751	1,958	3,709
458	Oswego	56,000		700	700	1,400	200	408	408	816
	Peekskill:									
459	Drum Hill district	9,676	5-21	514	643	1,157	100	247	267	514
460	Oakside district		5-51	490	548	1,038	38	345	374	719
461	Penn Yan*	4,254	5-21	(1,209)		1,209	178			
462	Plattsburg	7,010	5-21	1,221	1,197	2,418	90	791	711	1,502
463	Port Chester*	5,274	5-21	(1,432)		1,432	230			
464	Port Jervis	9,327	5-21	1,355	1,521	2,876	60	991	994	1,985
465	Poughkeepsie	22,206	5-21	(6,000)		6,000		1,441	1,563	3,004
466	Rochester	133,896	5-21	(44,000)		44,000	10,000	9,144	8,503	17,647
467	Rome	14,991	5-21				300	1,099	997	2,096
468	Saratoga Springs	11,975	5-25	(2,750)		2,750	75	1,123	1,150	2,273
469	Schenectady	19,902	5-21	(5,700)		5,700	1,200	(2,415)		2,415
470	Sing Sing	9,352	5-21	(1,831)		1,831		(1,107)		1,107
471	Syracuse	88,143	5-21	(24,600)		24,600	3,000	6,651	6,750	13,401
472	Troy	60,956	5-21				2,800	(7,401)		7,401
473	Utica	44,097	5-21	(14,549)		14,549	1,250	3,530	3,323	6,853
474	Waterloo	4,350	5-21				50	(a800)		a900
475	Watertown	14,725	5-21	(4,070)		4,070	200	1,213	1,217	2,430
476	Whitehall	4,434	5-21	(1,431)		1,431	150	(874)		874
477	Yonkers	32,033	5-21	(9,719)		9,719	1,900	(3,384)		3,384
	NORTH CAROLINA.									
478	Asheville	10,235	6-21	1,121	1,304	2,425	200	692	754	1,446
479	Charlotte	11,557	6-21	(2,878)		2,878	200	700	800	1,500
480	Durham	5,485	6-21	600	687	1,287	*80	320	380	700
481	Fayetteville	4,222	6-21	290	310	600	175	200	190	390
482	Goldsboro	4,017	6-21	(1,808)		1,808	*0	(1,159)		1,159
483	New Berne	7,843	6-21				300	*300	*350	*650
484	Raleigh*	12,678	6-21	2,151	2,397	4,548		1,192	1,342	2,534
485	Salisbury	4,418	6-21	425	380	805	75	214	200	414
486	Winston	8,018	6-21	1,000	1,200	2,200		*500	*670	*1,260
	NORTH DAKOTA.									
487	Fargo	5,664	7-20	(1,274)		1,274		(1,074)		1,074
488	Grand Forks	4,979	7-20	643	681	1,324	400	458	475	933

*Statistics of 1888-89. a Estimated.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
200	183,157	912	1				23		2	1,275	11	433
195	139,797	735	1	0	1	0	16	16	2	825	14	434
196	274,353	1,399	1	0	1	3	34	37	6	1,894	12	435
195	402,309	2,063	1	0	1	2	75	77	10	2,666	14	436
196	212,115	1,082	0	1	1	0	23	23	4	1,400	10	437
193	227,583	1,179	1	2	3				5	2,043	13	438
191	234,444	1,227	1	0	1	0	39	39	5	1,450	10	439
173	144,551	861	1	0	1	3	22	25	4	1,246	12	440
196	378,460	1,921.1	1	0	1	(53)		53	7	2,800	13	441
197	777,908	4,047	5	1	6	2	86	88	18		8	442
191	128,387	654.2	1	0	1	3	14	17	5	800	13	443
195			0	1	1	1	26	27	10	1,500	4	444
198	95,040	480	0	0	0	1	9	10	1	520		445
192	135,367	705	1	0	1	2	19	21	4	1,150	12	446
178	223,453	1,256	1	0	1	1	35	36	7	1,661	13	447
193	213,146	1,105	1	2	3	0	31	31	4	1,420	9	448
191	273,193	1,435				(41)		41	5			449
201	161,425	803				1	21	22	2	1,000	8	450
199	29,153,987	146,029	67	168	235	310	3,646	3,956	137	186,744		451
198	491,754	2,483.6	1	0	1	7	76	83	6	3,024	10	452
197	103,687	527	1	0	1	1	17	18	3	600	13	453
*192	*144,000	*750	1	0	1	1	16	17	5		13	454
194	221,636	1,142.4	2	1	3	5	35	40	10	2,066	13	455
190	216,969	1,148	1	1	2	2	39	41	6	1,605	12	456
194	491,568	2,508	1	0	1	3	69	72	14	4,000	13	457
200			1	1	2	2	25	27	6	1,000	13	458
196	84,672	432	0	0	0	1	11	12	1	511	11	459
199	103,272	532	1	1	2	0	11	11	1	612	12	460
195	91,260	468				2	16	18	5	723		461
190	202,265	1,065	1	0	1	1	37	38	7	1,409	12	462
		400.1	1	0	1	1	12	13	1	518		463
196	274,865	1,402.4	1	0	1	1	38	39	5	1,890	12	464
194	435,142	2,243.6	1	0	1	2	70	72	11	2,622	12	465
195	2,458,950	12,610	1	1	2	17	414	431	33	15,924	13	466
187	244,055	1,305	2	1	3	4	40	44	8	1,796	12	467
191	290,982	1,523	2	1	3	4	41	45	8	2,048	13	468
195	310,203	1,633				2	46	48	7	2,160	12	469
196	154,991	790.7	1	0	1	1	23	24	2	950	10	470
195	2,030,925	10,415	12	1	13	16	271	287	28	13,633	11	471
195	1,010,911	5,235	2	1	3	18	145	163	15	7,000	12	472
196	876,746	4,833	1	0	1	6	170	176	18	6,057	12	473
a190	a110,000	a462	0	0	0	4	15	19	4	950	12	474
195	320,670	1,646	3	9	12	5	60	65	9	3,000	12	475
190	112,939	567	1	0	1	2	17	19	5	1,000	12	476
191	472,595	2,474.3	*1	*3	*4	4	68	72	8			477
179	147,577	825	1	0	1	5	17	22	3	1,150	10	478
180			2	0	2	6	20	26	2	1,200	9	479
190			1	0	1	4	10	14	2		9	480
157	50,240	320	1	0	1	2	8	10	2	200	10	481
177	122,094	714	1	0	1	3	13	16	3	*1,150	9	482
200	35,000	175				*6	*6	*12	3	800	8	483
150	230,170	1,535				10	28	38	5	1,530		484
180	45,000	250	1	0	1	2	4	6	1	350	8	485
*180			3	2	5	4	13	17	2		9	486
												487
		690	1	0	1	1	22	23	5	1,250	12	488
172.5	91,683	521	1	0	1	0	15	15	2	645	11	

b Estimated; not separately reported by the census enumerators.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	OHIO.									
489	Akron	27,601	6-21	4,031	3,993	8,024	1,026	2,424	2,483	4,907
490	Alliance	7,607	6-21	926	993	1,919	125	785	821	1,606
491	Ashtabula	8,338	6-21				150	540	474	1,014
492	Avondale	4,473	6-21	(1,235)		1,235		(650)		650
493	Bellaire*	9,934	6-21	(3,346)		3,346	425	894	945	1,839
494	Bellefontaine*	4,245	6-21	550	577	1,127	100	401	392	793
495	Brooklyn	4,585	6-21	(1,307)		1,307		(719)		719
496	Bucyrus	5,974	6-21	845	858	1,703	120	574	611	1,185
497	Cambridge	4,361	6-21	(1,390)		1,390		(1,032)		1,032
498	Canton	26,189	6-21	3,461	3,634	7,095	1,000	2,155	2,237	4,392
499	Chillicothe	11,288	6-21	1,720	1,676	3,396	325	1,071	954	2,025
500	Cincinnati	296,908	6-21	(84,338)		84,338	16,221	18,751	17,908	36,659
501	Circleville	6,556	6-21	(2,106)		2,106	218	624	630	1,254
502	Cleveland	261,353	6-21	37,129	34,644	71,773	*14,013	18,964	18,677	37,641
503	Columbus	88,150	6-21	12,866	12,559	25,425	4,122	6,128	6,333	12,461
504	Dayton*	61,220	6-21	7,795	7,671	15,466	1,821	3,854	3,651	7,505
505	Defiance	7,694	6-21	1,198	1,076	2,274	500	674	628	1,292
506	Delaware	8,224	6-21	1,103	1,098	2,201	268	720	880	1,600
507	Delphos	4,516	6-21	816	874	1,690	250	450	500	950
508	East Liverpool	10,956	6-21	1,850	1,805	3,655	*307	1,196	1,135	2,331
509	Elyria	5,611	6-21	813	838	1,651	325	472	582	1,054
510	Findlay	18,553	6-21	2,000	2,014	4,014	160	1,592	1,635	3,227
511	Fostoria	7,070	6-21	832	977	1,809	228	634	654	1,288
512	Fremont	7,141	6-21	1,142	1,284	2,426	477	599	587	1,186
513	Galion	6,326	6-21	930	915	1,845	300	679	701	1,380
514	Gallipolis	4,498	6-21	947	953	1,900	110	547	610	1,157
515	Greenville	5,473	6-21	606	602	1,208	105	(952)		952
516	Hamilton	17,565	6-21	2,829	2,705	5,534	930	1,154	1,215	2,369
517	Ironton	10,939	6-21	1,716	1,726	3,442	200	1,099	1,122	2,221
518	Jackson*	4,320	6-21	(1,523)		1,523		(1,178)		1,178
519	Kenton*	5,557	6-21	(1,394)		1,394		(1,103)		1,103
520	Lancaster	7,555	6-21	1,113	1,116	2,229	225	731	741	1,472
521	Lima	15,981	6-21	512	500	1,012	500	1,252	1,230	2,482
522	Lorain	4,863	6-21	(1,360)		1,360		(825)		825
523	Mansfield*	13,473	6-21	(3,603)		3,603		1,226	1,281	2,507
524	Marietta	8,273	6-21	959	988	1,947	50	509	619	1,128
525	Marion	8,327	6-21	(1,622)		1,622	150	529	450	979
526	Martins Ferry	6,250	6-21	(1,830)		1,830	200	(1,430)		1,430
527	Massillon*	10,092	6-21	(3,461)		3,461		897	865	1,762
528	Middletown	7,681	6-21	1,000	1,200	2,200		575	638	1,213
529	Mount Vernon	6,027	6-21	(1,651)		1,651	130	597	639	1,236
530	Nelsonville	4,558	6-21	797	800	1,597	45	590	647	1,237
531	New Philadelphia	4,456	6-21	(1,403)		1,403		(889)		889
532	Newark	14,270	6-21	1,877	1,980	3,857	300	1,228	1,360	2,588
533	Niles	4,289	6-21	(1,420)		1,420	200	(901)		901
534	Norwalk	7,195	6-21	1,143	1,165	2,308	308	651	659	1,310
535	Oberlin	4,376	6-21	(1,323)		1,323		(918)		918
536	Painesville	4,755	6-21	574	542	1,116	200	385	376	761
537	Piqua	9,090	6-21	1,424	1,455	2,879	*312	724	639	1,363
538	Pomeroy	4,726	6-21	882	767	1,649	100	522	512	1,034
539	Portsmouth	12,394	6-21	1,887	2,240	4,127	400	1,065	1,143	2,208
540	Salem	5,780	6-21	769	786	1,555		641	592	1,233
541	Sandusky	18,471	6-21	2,973	3,149	6,122	1,100	1,529	1,500	3,029
542	Sidney	4,850	6-21	781	756	1,537	160	518	466	984
543	Springfield	31,895	6-21	4,840	4,481	9,321		2,583	2,515	5,098
544	Steubenville	13,394	6-21	2,302	2,255	4,557	600	1,114	1,178	2,292
545	Tiffin	10,801		1,494	1,494	2,988	700	(1,500)		1,500
546	Toledo	81,434	6-21	12,610	13,278	25,888	4,000	5,454	5,423	10,877
547	Troy	4,494	6-21	662	638	1,300	60	415	444	859
548	Urbana	6,510	6-21	956	898	1,854	200	583	542	1,125
549	Van Wert	5,512	6-21	801	866	1,667		637	698	1,335
550	Warren*	5,973	6-21	(2,340)		2,340		575	598	1,173
551	Washington C. H.	5,742	6-21	782	829	1,611	*10	590	630	1,220
552	Wellston	4,377	6-21	769	674	1,443	0	564	590	1,154
553	Wellsville	5,247	6-21	(1,505)		1,505		(1,010)		1,010
554	West Cleveland	4,117	6-21	(1,261)		1,261		(605)		605

*Statistics of 1888-89.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
192	763,493	3,976.5	1	0	1	6	93	99	11	4,961	11	489
195	240,240	1,232	3	1	4	6	22	28	5	1,641	11	490
186	130,864.5	706	2	0	2	3	15	18	4	1,050	12	491
190	95,000	500	1	0	1	1	14	15	1	.....	.....	492
180	219,240	1,218	1	0	1	3	29	32	6	1,575	.....	493
180	113,940	633	1	0	1	3	17	20	3	812	.....	494
180	102,030	537	1	0	1	2	13	15	3	.....	.....	495
185	160,210	866	0	0	0	3	17	20	2	1,111	12	496
180	147,420	819	1	0	1	2	16	18	4	.....	.....	497
195	648,540	3,372	3	1	4	12	68	80	15	4,107	11	498
187	312,477	1,671	1	0	1	3	40	43	5	2,100	12	499
190	5,463,260	28,754	56	9	65	86	598	684	52	39,600	12	500
194	166,064	856	2	1	3	0	27	27	2	1,490	12	501
187	4,081,830	26,640.8	8	2	10	40	664	704	51	.....	12	502
189	1,809,864	9,576	6	12	18	18	233	251	25	11,835	12	503
200	1,199,840	5,999.2	3	0	3	8	163	171	19	6,760	.....	504
200	181,670	908	1	0	1	0	24	24	6	1,200	12	505
190	265,050	1,395	1	0	1	0	29	29	5	1,500	11	506
180	135,000	750	1	0	1	4	15	19	3	1,000	12	507
179	265,815	1,485	0	1	1	1	34	35	5	2,123	12	508
194	152,200	785	1	0	1	0	20	20	5	995	12	509
180	413,100	2,295	2	1	3	5	54	59	14	3,000	12	510
180	161,100	895	1	0	1	3	18	21	4	*1,010	11	511
175	154,300	876	1	0	1	5	20	25	6	1,100	12	512
190	191,073	1,022	1	0	1	4	18	22	2	1,250	12	513
177	151,335	855	1	1	2	4	21	25	7	1,500	11	514
180	128,520	714	1	2	3	7	15	22	2	1,200	12	515
195	367,965	1,887	2	0	2	0	38	48	6	2,620	12	516
186	327,174	1,759	1	0	1	2	38	40	5	2,200	12	517
180	164,700	915	1	0	1	1	19	20	3	.....	.....	518
180	146,340	813	1	0	1	4	22	26	5	.....	.....	519
171	175,610	1,027.4	1	0	1	4	28	32	3	1,290	11	520
179	328,286	1,834	2	2	4	3	44	47	6	2,500	12	521
190	133,000	700	1	0	1	0	16	16	5	.....	.....	522
180	366,120	2,034	1	0	1	2	48	50	9	.....	.....	523
182	170,898	939	3	3	6	2	23	25	5	1,470	12	524
180	142,740	793	1	0	1	0	21	21	4	.....	12	525
180	179,640	998	1	0	1	6	20	26	3	1,350	14	526
200	262,200	1,311	1	0	1	4	24	28	6	.....	11	527
195	160,485	823	1	0	1	2	22	24	3	1,213	.....	528
190	173,850	915	1	0	1	0	24	24	6	.....	11	529
177	166,380	940	1	0	1	0	20	20	2	1,060	12	530
190	116,850	615	1	0	1	0	18	18	1	.....	.....	531
184	339,204	1,843.5	1	0	1	4	52	56	10	2,650	12	532
178	118,370	665	1	0	1	0	15	15	4	800	12	533
195	189,735	973	1	0	1	4	25	29	6	1,160	12	534
190	134,330	707	1	0	1	1	20	21	3	.....	.....	535
185.5	108,332	584	1	0	1	3	17	20	3	680	12	536
180	192,060	1,067	1	0	1	3	29	32	5	*1,151	.....	537
180	138,240	768	1	0	1	3	17	20	5	1,200	12	538
186	310,444	1,669	1	0	1	4	42	46	7	*2,000	12	539
181	175,208	968	0	0	0	1	19	20	3	1,252	12	540
194	485,232.8	2,501.2	2	0	2	3	62	65	10	3,069	12	541
172.5	139,886	818	1	0	1	3	21	24	5	981	12	542
196	819,946.4	4,183.4	1	0	1	18	95	113	16	.....	12	543
192.5	335,142.5	1,741	1	0	1	5	44	49	6	2,211	12	544
196	226,576	1,156	1	0	1	5	28	33	5	1,600	12	545
195	1,630,785	8,363	3	2	5	14	199	213	28	10,150	11	546
191	144,014	754	3	1	4	4	20	24	3	900	13	547
190	153,900	810	1	0	1	7	15	22	7	1,005	12	548
174	177,306	1,019	1	0	1	4	22	26	3	1,300	12	549
190	174,420	918	1	0	1	3	22	25	8	.....	.....	550
178	139,742	785	1	0	1	2	24	26	4	1,300	11	551
180	126,900	705	1	0	1	4	12	16	3	.....	12	552
180	172,440	958	1	0	1	1	14	15	1	.....	.....	553
190	77,710	409	1	0	1	0	11	11	2	.....	.....	554

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	OHIO—continued.									
555	Wooster	5,901	6-21	992	986	1,978	129	622	631	1,253
556	Xenia	7,301	6-21	996	1,011	1,997	200	719	702	1,421
557	Youngstown	33,220	6-21	4,150	4,130	8,280	1,400	1,975	2,050	4,025
558	Zanesville	21,009	6-21	(6,481)		6,481	.....	1,795	1,709	3,504
	OREGON.									
559	Astoria*	6,184	4-20	(1,300)		1,300	40	.....	.....	.....
560	East Portland	10,532	4-20	1,602	1,624	3,226	106	1,015	1,240	2,255
561	Portland	46,385	4-20	4,273	4,464	8,737	.....	2,274	2,618	4,892
562	Salem	a7,000	4-20	1,225	1,275	2,500	523	634	552	1,186
	PENNSYLVANIA.									
563	Allegheny	105,287	6-21	11,169	10,473	21,642	8,675	8,242	8,735	16,987
564	Allentown	25,228	.....	.....	.....	.....	300	2,181	2,181	4,362
565	Altoona	30,337	.....	.....	.....	.....	1,200	2,643	2,742	5,385
566	Archbald	4,032	.....	.....	.....	.....	.....	384	481	865
567	Ashland	7,346	6-21	800	800	1,600	250	689	719	1,408
568	Beaver Falls	9,735	.....	.....	.....	.....	*25	978	827	1,805
569	Bethlehem	6,762	.....	.....	.....	.....	492	468	473	941
570	Bloomsburg	4,635	.....	.....	.....	.....	.....	401	375	776
571	Braddock	8,561	.....	.....	.....	.....	600	375	525	900
572	Bradford	10,514	.....	.....	.....	.....	250	1,020	1,036	2,056
573	Bristol	6,553	6-21	728	752	1,480	200	419	435	854
574	Butler	8,734	.....	.....	.....	.....	390	900	821	1,721
575	Carbondale	10,833	6-21	1,175	1,212	2,387	217	824	916	1,740
576	Carlisle	7,620	.....	.....	.....	.....	.....	520	542	1,062
577	Chambersburg	7,863	6-21	950	900	1,850	150	727	733	1,460
578	Chester	20,226	.....	.....	.....	.....	300	1,583	1,735	3,318
579	Columbia	10,599	6-21	995	1,102	2,097	298	919	964	1,883
580	Connellsville	5,629	6-21	608	629	1,237	150	567	604	1,171
581	Conshohocken	5,470	6-21	620	600	1,220	400	364	370	734
582	Corry	6,677	.....	.....	.....	.....	200	503	535	1,038
583	Danville	7,908	.....	.....	.....	.....	50	587	632	1,219
584	Du Bois	6,149	6-21	b675	b625	b1,300	300	493	445	938
585	Dunmore	8,315	6-21	800	950	1,750	.....	684	860	1,544
586	Easton	14,481	.....	.....	.....	.....	125	1,239	1,279	2,518
587	Erie	40,634	.....	.....	.....	.....	3,500	2,794	2,672	5,466
588	Franklin	6,221	.....	.....	.....	.....	.....	673	749	1,422
589	Greensburg	4,202	.....	.....	.....	.....	.....	371	376	747
590	Harrisburg	39,385	.....	.....	.....	.....	700	3,278	3,535	6,813
591	Hazleton	11,872	6-21	1,500	1,500	3,000	300	899	910	1,809
592	Homestead	7,911	.....	.....	.....	.....	.....	592	584	1,176
593	Huntingdon	5,729	.....	.....	.....	.....	0	581	581	1,162
594	Johnstown	21,805	.....	.....	.....	.....	.....	742	798	1,540
595	Lancaster	32,011	.....	.....	.....	.....	500	2,335	2,311	4,646
596	Lansford	4,004	.....	.....	.....	.....	.....	329	412	741
597	Lebanon	14,664	.....	.....	.....	.....	100	1,086	1,126	2,212
598	Lock Haven	7,358	6-21	750	850	1,600	300	560	742	1,302
599	McKeesport	20,741	6-21	(5,000)		5,000	600	(2,832)		2,832
600	Mahoney City	11,286	.....	.....	.....	.....	159	833	895	1,728
601	Manch Chunk	4,101	.....	.....	.....	.....	200	383	316	699
602	Meadville	9,520	.....	.....	.....	.....	400	868	964	1,832
603	Middletown	5,080	.....	.....	.....	.....	.....	443	474	917
604	Milton	5,317	.....	.....	.....	.....	.....	244	290	534
605	Monongahela City	4,096	.....	.....	.....	.....	40	(900)		900
606	Mount Carmel	8,254	.....	.....	.....	.....	.....	755	751	1,506
607	Nanticoke	10,044	.....	.....	.....	.....	400	689	782	1,471
608	New Brighton	5,616	.....	.....	.....	.....	300	516	634	1,150
609	New Castle	11,600	.....	.....	.....	.....	450	1,150	1,110	2,260
610	Norristown	19,791	.....	.....	.....	.....	400	1,297	1,268	2,565
611	Oil City	10,932	.....	.....	.....	.....	.....	1,096	1,027	2,123
612	Olyphant	4,083	.....	.....	.....	.....	.....	337	364	701
613	Philadelphia	1,046,964	.....	.....	.....	.....	25,000	(c171,467)		171,467c

*Statistics of 1888-89. b Estimated.
a Estimated: not separately returned by census enumerators.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
198	206,124	1,068	2	2	4	2	28	30	5	1,400	12	555
195	215,629	1,106	1	0	1	7	29	36	7	1,601	11	556
175	560,000	3,200	3	0	3	4	70	74	15	3,200	13	557
190	558,030	2,937	2	1	3	3	64	67	15			558
												559
178	279,444	1,598	1	0	1	5	36	41	7	2,000	11	560
191	648,684	3,397.3	3	5	8	3	79	82	7	5,000	12	561
186	133,698	743	0	1	1	1	15	16	3	1,356	8	562
200	2,593,400	12,382	21	3	24	21	261	282	24		11	563
193.5	584,176.5	3,019	1	0	1	14	60	74	11	4,300	11	564
180	671,940	3,733	9	0	9	1	90	91	11	5,100	12	565
180	94,680	526				2	11	13				566
180	178,920	994	1	0	1	4	19	23	4	1,500	8	567
150	206,500	1,310	*1	*0	*1	1	38	39	*4	*1,500		568
198	*b*147,114	743	1	0	1	3	18	21	3	930	11	569
150	84,000	560				4	13	17	3			570
180	*b*122,580	681	1	0	1	1	17	18	3	950	8	571
173	301,020	1,740	0	1	1	0	40	40	6	1,900	9	572
200	96,000	480	0	2	2	0	17	17	3	845	10	573
160	171,241	1,119	1	3	4	3	22	25	4	1,756	12	574
200	261,400	1,307	1	0	1	4	28	32	9	2,100		575
200	193,800	969				6	17	23	7	1,100	11	576
180	236,520	1,314	0	0	0	4	29	33	5	1,600	12	577
200	452,000	2,260	1	0	1	2	63	65	13	3,350	13	578
170	245,210	1,443	1	0	1	3	30	33	5	1,700	14	579
180	133,020	739	1	0	1	3	16	19	3	930		580
200	102,400	492	2	0	2	2	14	16	2	750	18	581
180	144,900	805	1	0	1	1	21	22	4	1,200	13	582
175	178,500	1,020				3	27	30	9	1,000	14	583
157	95,613	609	1	0	1	4	14	18	5	1,400	11	584
200	212,000	1,060	1	0	1	1	24	25	9		11	585
197	386,120	1,960	0	0	0	11	49	60	11	2,768	11	586
196	785,960	4,010	1	16	17	9	145	154	18	5,500	11	587
170	184,050	1,145				3	24	27				588
170	117,300	690				3	13	16				589
195	868,248	4,554				17	107	124	19	7,400	13	590
180	241,920	1,344	1	0	1	6	28	34	6	1,600	12	591
180	144,720	804				1	19	20				592
170	144,500	850	1	1	2	3	20	23	2	1,400	12	593
150	168,000	1,120				4	21	25				594
200	665,680	3,328	2	0	2	5	73	78	21	4,000	12	595
200	95,200	479				3	9	12				596
180	346,320	1,924	1	0	1	7	32	39	3	2,100	13	597
160	160,000	1,000	1	0	1	6	21	27	4	1,350	12	598
180	364,800	2,060	4	1	5	4	48	52	7	3,120	8	599
180	*c*245,880	1,366	1	0	1	5	25	30	4	1,995	12	600
198	98,406	497	0	0	0	2	13	15	3	800	12	601
180	273,060	1,517	1	2	3	3	45	48	5	2,600	12	602
150	107,100	714				4	14	18				603
120	44,640	372				1	10	11				604
160	*c*116,320	727	1	0	1	1	16	17	2		10	605
180	169,020	939				6	13	19				606
180	199,800	1,110	1	0	1	4	23	27	5	1,190	12	607
180	184,000	1,081	1	0	1	0	20	20	3	1,500	12	608
180	300,240	1,668	3	2	5	2	40	24	5	2,200	13	609
200	355,800	1,779				4	51	55	6	2,550	11	610
170	280,330	1,649				2	34	36				611
180	99,000	550				2	8	10				612
201	19,965,722	99,332	24	42	66	105	2,589	2,694	277	120,800	12*d*	613

c The number belonging at the end of the year was 414,396.
d Including one year in the kindergartens.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	PENNSYLVANIA—con.									
614	Phœnixville	8,514	.....	.....	.....	.....	18	732	749	1,481
615	Pittsburg	238,617	.....	.....	.....	.....	.....	15,326	15,688	31,014
616	Pittston	10,302	.....	.....	.....	.....	600	665	488	1,153
617	Plymouth	9,344	.....	.....	.....	.....	.....	639	738	1,377
618	Pottstown	13,285	.....	.....	.....	.....	95	1,128	1,077	2,205
619	Pottsville	14,117	.....	.....	.....	.....	200	1,285	1,150	2,435
620	Reading	58,661	6-21	6,000	6,500	12,500	1,600	4,353	4,334	8,687
621	Renovo	4,154	.....	.....	.....	.....	300	270	400	670
622	Scranton	75,215	.....	.....	.....	.....	3,500	5,278	5,775	11,053
623	Shamokin	14,403	.....	.....	.....	.....	600	1,293	1,413	2,706
624	Sharon	7,459	.....	.....	.....	.....	300	703	767	1,470
625	Sharpsburg	4,898	.....	.....	.....	.....	.....	278	315	593
626	Shenandoah	15,944	6-21	1,950	1,950	3,900	100	1,294	1,390	2,684
627	South Bethlehem	10,302	.....	.....	.....	.....	.....	810	695	1,505
628	South Easton	5,616	.....	.....	.....	.....	150	713	627	1,340
629	South Chester	7,076	.....	.....	.....	.....	.....	482	465	948
630	Steelton	9,250	.....	.....	.....	.....	175	710	723	1,433
631	Sunbury	5,930	.....	.....	.....	.....	.....	526	535	1,061
632	Tamaqua	6,054	6-21	925	875	1,800	.....	632	610	1,242
633	Tarentum	4,627	.....	.....	.....	.....	.....	353	434	787
634	Titusville	8,073	.....	.....	.....	.....	.....	(1,385)		1,385
635	Towanda	4,169	.....	.....	.....	.....	.....	369	384	753
636	Tyrone	4,705	.....	.....	.....	.....	.....	377	408	785
637	Uniontown	6,359	.....	.....	.....	.....	* 40	533	567	1,100
638	Warren	4,332	.....	.....	.....	.....	200	392	435	827
639	Washington	7,063	6-21	.....	.....	.....	200	497	563	1,060
640	West Chester	8,028	6-21	.....	.....	.....	350	504	626	1,130
641	Wilkesbarre, district No. 1.	.....	.....	.....	.....	.....	.....	1,381	1,430	2,811
642	Wilkesbarre, district No. 2.	37,718	6-21	.....	.....	.....	103	568	604	1,172
643	Wilkesbarre, district No. 3.	.....	.....	.....	.....	.....	500	999	1,120	2,119
644	Wilkinsburg	4,662	.....	.....	.....	.....	.....	400	475	875
645	Williamsport	27,132	6-21	.....	.....	.....	1,000	2,173	2,241	4,414
646	York	20,793	.....	1,850	1,900	3,750	350	1,654	1,572	3,226
	RHODE ISLAND.									
647	Bristol	5,478	5-16	550	605	1,155	51	495	514	1,009
648	Central Falls	*d* 8,700	.....	.....	.....	.....	.....	(2,931)		2,931
649	East Providence *c*	8,422	5-16	879	867	1,746	100	1,119	1,264	2,383
650	Newport	19,457	5-16	1,012	1,000	2,012	722	1,244	1,268	2,512
651	Olneyville	*d* 8,042	5-16	880	817	1,697	82	871	1,070	1,941
652	Pawtucket	27,633	5-16	2,783	2,630	5,413	922	2,566	2,453	5,019
653	Providence	132,146	5-16	11,529	11,585	23,114	3,628	10,486	10,316	20,802
654	Westerly *c*	6,813	5-16	670	664	1,334	0	620	619	1,239
655	Woonsocket	20,830	5-16	2,240	2,255	4,495	1,500	1,150	1,081	2,231
	SOUTH CAROLINA.									
656	Charleston	54,955	6-16	3,496	4,218	7,714	2,957	2,135	3,152	5,287
657	Columbia	15,353	6-18	(2,250)		2,250	500	775	949	1,724
658	Greenville	8,607	6-18	.....	.....	.....	.....	822	942	1,764
659	Spartanburg	5,544	6-18	548	567	1,115	280	(835)		835
	SOUTH DAKOTA.									
660	Sioux Falls	10,177	7-20	(1,586)		1,586	250	717	724	1,441
	TENNESSEE.									
661	Chattanooga	29,100	6-21	3,326	3,320	6,646	1,200	2,185	2,356	4,541
662	Clarksville	7,924	6-21	1,353	1,245	2,598	240	700	790	1,490
663	Columbia	5,370	6-21	(1,809)		1,809	.....	(824)		824

*Statistics of 1888-89.

b Some schools were in session but 187 days.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
190	202, 920	1,068	1	0	1	2	26	28	4	1,400	12	614
200	4,531,200	22,656	16	13	29	23	566	589	65	32,000	11	615
180	166,032	980	0	0	0	2	23	25	5	1,205	21	616
160	144,640	904	1	0	1	5	19	24	4	1,200	11	617
200	312,400	1,562	1	0	1	6	37	43	19	2,216	12	618
200	b360,000	1,800	1	0	1	8	45	53	9	2,500	12	619
190	1,049,420	7,418				7	182	189	32	8,700	12	620
160	94,400	590	1	0	1	2	10	12	3	675	12	621
195	1,419,600	7,280	1	0	1	21	181	202	35	9,000	12	622
160	300,480	1,878	1	0	1	6	32	38	6	2,450		623
160	183,600	1,200	3	0	3	1	25	26	4		13	624
180	67,340	373				1	9	10				625
180	343,260	1,907	1	0	1	8	35	43	7	2,669	11	626
190	187,150	985				8	19	27				627
200	776,800	884	1	0	1	8	15	23	8	1,400	12	628
175	124,075	709				3	17	20				629
180	218,520	1,214	1	0	1	13	12	25	5	1,505	12	630
150	120,300	802				6	13	19				631
200	171,800	859				2	15	17	3	1,100	10	632
160	102,240	639				3	11	14				633
177	220,542	1,246	1	0	1	2	32	34	4	1,581	11	634
170	92,990	547				2	14	16				635
180	136,440	758				3	14	17				636
170	118,150	695	*0	*0	*0	2	15	17	*3	*1,000		637
180	110,340	613	1	0	1	0	19	19	4	760	12	638
180	138,240	768	1	0	1	1	20	21	3	1,042	11	639
	121,140	706	1	0	1	3	23	26	3	1,066	12	640
180	397,540	2,153				8	39	47				641
191	208,615	1,092	1	0	1	4	17	21	5	1,223	11	642
182	298,480	1,640	2	0	2	6	38	44	4		11	643
160	104,000	650				2	15	17				644
180	587,700	3,265	1	0	1	13	75	88	14	4,500	12	645
180	395,280	2,196	1	0	1	20	43	63	15	2,800	11	646
193	143,785	745	1	0	1	4	21	25	9	1,051	12	647
193	241,636	1,252					(27)	27	6	1,620		648
200	242,800	1,214				2	43	45	15	1,442		649
200	361,000	1,805				5	54	59	11	2,426	14	650
b192	173,617	920	1	0	1	3	27	30	18	1,532	14	651
192	566,164	2,968	3	0	3	8	78	86	24	5,000	13	652
157.5	2,310,344.6	12,924.1	12	10	24	24	370	394	59	17,111	13	653
152	152,148	1,007	3	0	3	10	33	43	15	1,527	14	654
195	260,752	1,395	1	0	1	3	42	45	15	2,229	13	655
193	959,982	4,974	6	9	15	2	92	94	6	5,000	10	656
175	195,956	1,120	1	0	1	4	23	27	4	1,192	10	657
170	155,269	919	1	0	1	4	17	21	4	1,500	8	658
177	90,270	510	2	0	2	3	11	14	3	322		659
176	147,483.5	899.1	2	0	2	4	30	34	7	1,375	12	660
177	501,861	2,835.3	1	0	1	9	65	74	6	3,547	11	661
192	199,221	1,037.5	1	0	1	4	20	24	2	1,094	9	662
						3	10	13	2			663

c This report includes the entire town.
d Estimated.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	TENNESSEE—cont'd.									
664	Jackson	10,039	6-21	(3,068)		3,098	*300	(1,513)		1,513
665	Johnson City	4,161	6-21	(789)		789		(555)		555
666	Knoxville	22,535	6-21	3,405	4,922	8,327	460	1,517	1,771	3,288
667	Memphis	64,495	6-21	(15,012)		15,012	*1,500	(6,073)		6,073
668	Nashville	76,168	6-21	9,627	10,620	20,247	750	3,962	4,513	8,475
	TEXAS.									
669	Austin	14,575	8-16	1,973	2,062	4,035	400	1,306	1,454	2,760
670	Brenham	5,209	7-16	618	596	1,214	150	447	570	1,017
671	Brownsville	6,134	8-16	974	803	1,777	200	360	186	546
672	Corpus Christi	4,387	8-16	555	551	1,106		(327)		327
673	Corsicana	6,285	7-20	949	1,051	b2,000		544	563	1,107
674	Dallas	38,067	8-21	3,909	4,343	8,252		2,220	1,475	4,675
675	Denison	10,958	7-18	858	951	1,809	*200	(1,799)		1,799
676	El Paso	10,338	8-16	533	510	1,043	100	444	415	859
677	Fort Worth	23,076	7-18	1,694	1,851	3,545	250	1,520	1,809	2,329
678	Gainesville	6,594	7-19	646	773	1,419		(1,388)		1,388
679	Galveston	29,084	8-16	4,198	4,582	8,780	1,500	(3,922)		3,922
680	Greenville	4,330	8-16	583	581	1,164		(859)		859
681	Houston	27,557	8-16	2,975	2,828	5,803	350	1,592	1,853	3,445
682	Laredo	11,319	8-16	938	893	1,831		(896)		896
683	Marshall	7,207	8-16	922	708	1,330		(1,296)		1,296
684	Palestine	5,838	8-16	(1,747)		1,747	*150	a (700)	n	a 700
685	Paris	8,254	8-16	1,216	1,278	2,494	60	896	909	1,805
686	San Antonio	37,673	6-18	5,110	5,465	10,575		(4,407)		4,407
687	Sherman	7,335	7-16	841	883	1,724		(1,262)		1,262
688	Temple	4,047		290	329	619		(480)		480
689	Tyler	6,908	7-21	559	595	1,154	100	(1,109)		1,109
690	Waco	14,445	7-18	1,761	1,961	3,722		1,279	1,358	2,637
	UTAH.									
691	Logan	4,565	6-18	706	647	1,353	250	535	431	966
692	Ogden City	14,889	6-18	1,391	1,239	2,930	300	986	956	1,942
693	Provo City	5,159	6-18	654	637	1,291	450	399	419	818
694	Salt Lake City	44,843	6-18	4,042	4,038	8,080	1,500	2,258	2,136	4,394
	VERMONT.									
695	Barre	4,146						(530)		530
696	Brattleboro	5,467	5-19	500	531	1,031	165	390	399	789
697	Burlington	14,590	5-18	1,772	1,572	3,344	1,470	670	793	1,463
698	Rutland	8,239	5-18	965	1,210	2,175	550	450	761	1,211
699	St. Albans	c7,771	5-18	651	742	1,393	400	(965)		965
	VIRGINIA.									
700	Alexandria	14,339	5-21	2,401	2,422	4,823	600	1,025	813	1,838
701	Charlottesville	5,591						(764)		764
702	Danville	10,305	5-21	1,682	1,896	3,578	226	776	723	1,499
703	Fredericksburg	4,528	5-21	752	801	1,553	40	390	471	861
704	Lynchburg	19,709	5-21	3,215	3,533	6,748	300	1,479	1,871	3,350
705	Manchester	9,216	5-21	(2,496)		2,496		(1,063)		1,063
706	Norfolk	34,871	5-21	4,599	5,005	9,604	2,925	1,138	1,437	2,575
707	Petersburg	22,689	5-21	3,604	3,846	7,450	500	1,471	1,744	3,215
708	Portsmouth	13,268	5-21	(3,315)		3,315	500	(1,705)		1,705
709	Richmond	81,388	5-21	11,677	13,297	24,974	3,000	5,405	6,344	11,749
710	Roanoke	16,159	5-21	2,018	2,098	116	331	943	1,090	2,033
711	Staunton	6,975	5-21	970	957	1,927	360	563	569	1,132
712	Winchester	5,196	5-21	879	861	1,740	60	433	377	810

* Statistics of 1888-89.
a Estimated.
b The population of the State scholastic age, 8-16, is 1,485.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
180	237,960	1,322	.....	.....	.....	3	18	21	4	.....	.....	664
160	.....	.....	.....	.....	.....	5	3	8	.....	.....	.....	665
187	475,072	2,540	6	3	9	19	41	60	9	2,475	10	666
176	623,973	3,603	2	9	11	9	78	87	11	4,241	11	667
184	1,266,537	6,904	13	11	24	24	114	138	14	6,450	11	668
173	329,540.5	1,945.3	3	1	4	11	57	68	12	2,500	11	669
160	122,040	643	1	1	2	6	14	20	4	1,100	10	670
175	a68,950	*394	1	1	2	2	10	12	2	700	.....	671
190	32,490	171	.....	.....	.....	1	6	7	2	378	10	672
180	135,914.9	705.8	1	0	1	4	17	21	4	1,100	10	673
180	522,580	3,016	2	1	3	22	51	73	14	3,200	11	674
177	189,597	1,071	3	4	7	2	33	35	6	1,528	11	675
180	90,540	503	1	0	1	2	14	16	4	550	11	676
180	446,040	2,478	2	1	3	12	38	50	13	3,000	11	677
178	165,540	930	.....	.....	.....	3	22	25	4	1,035	10	678
172	525,976	3,058	1	4	5	10	71	90	10	3,071	11	679
159	104,576	664	.....	.....	.....	4	12	16	4	842	10	680
175	402,850	2,302	1	0	1	16	45	61	12	2,700	11	681
171	58,824	344	.....	.....	.....	2	8	10	9	960	.....	682
160	64,900	646	*1	*0	*1	7	11	18	7	1,500	10	683
a 180	.....	.....	1	0	1	4	8	12	3	750	11	684
180	198,720	1,104	1	0	1	4	29	33	3	1,420	11	685
200	504,200	2,971	.....	.....	.....	14	62	76	12	3,494	11	686
180	144,180	801	.....	.....	.....	2	17	19	3	1,058	9	687
160	62,720	392	.....	.....	.....	3	6	9	3	500	10	688
169	124,722	738	.....	.....	.....	2	17	19	4	900	10	689
180	269,640	1,498	0	1	1	8	40	48	10	2,278	11	690
200	81,000	405	1	0	1	2	5	67	6	500	.....	691
194	192,612	998	1	1	2	5	11	16	7	1,000	.....	692
197	69,035	355	.....	.....	.....	6	5	11	5	635	10	693
195	457,605	2,347	0	0	0	21	46	67	21	.....	.....	694
200	.....	.....	0	0	0	2	8	9	.....	.....	13	695
172	120,400	700	0	0	0	1	19	21	7	900	.....	696
174	211,314.5	1,214	1	0	1	2	39	41	10	1,428	13	697
190	167,010	879	1	0	1	2	27	29	7	1,365	13	698
186	109,377.5	625.1	1	0	1	1	19	20	2	.....	13	699
194	273,928	1,412	1	0	1	8	22	30	5	1,650	8	700
180	91,980	511	.....	.....	.....	(10)		10	.....	.....	.....	701
188	181,570	965.8	3	0	3	4	26	30	3	1,000	11	702
185.6	127,071	682.4	0	0	0	2	12	14	4	761	11	703
193	487,518	2,526	1	1	2	12	50	62	11	2,900	10	704
180	122,400	680	.....	.....	.....	5	10	15	2	1,000	.....	705
190	320,328.6	1,685.9	1	0	1	6	25	31	7	2,400	8	706
185	439,745	2,375	1	0	1	3	45	48	9	2,350	11	707
200	237,800	1,189	0	0	0	3	21	24	3	1,222	11	708
180	1,700,640	9,448	17	0	17	21	199	220	25	10,219	10	709
160	142,560	891	0	0	0	3	13	16	3	620	8	710
180	156,614	870	2	0	2	7	17	24	2	1,200	10	711
190	115,909	*593	1	0	1	3	10	13	2	780	10	712

d The attendance of the pupils is very irregular, and but few teachers are required.
e Population of the town.

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TABLE 1.—*Statistics of population, private schools, and public school*

	City.	Total population (census of 1890).	School census age.	Number of children of school census age.			Estimated number of pupils in private and parochial schools.	Number of different pupils enrolled in public day schools.		
				Male.	Female.	Total.		Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10
	WASHINGTON.									
713	Seattle	42,837	5-21	4,108	3,696	7,804	.....	2,389	2,232	4,621
714	Spokane Falls	19,922	5-21	1,666	1,617	3,283	527	1,157	1,008	2,165
715	Tacoma	36,006	5-21	(3,600)		3,600	856	1,831	1,701	3,532
716	Wallawalla	4,709	5-21	706	736	1,442	300	608	623	1,231
	WEST VIRGINIA.									
717	Charleston	6,742	6-21	.....	.....	.....	100	646	686	1,332
718	Huntington	10,108	6-21	(2,321)		2,321	75	753	843	1,596
719	Martinsburg	7,226	6-21	1,100	1,102	2,202	.....	614	583	1,197
720	Parkersburg	8,408	6-21	.....	.....	.....	300	1,089	1,120	2,209
721	Wheeling	34,522	6-21	5,195	5,320	10,515	850	2,743	2,866	5,609
	WISCONSIN.									
722	Appleton	11,869	4-20	2,047	2,230	4,277	600	956	951	1,907
723	Baraboo	4,605	4-20	554	660	1,214	35	490	585	1,075
724	Beloit	6,315	4-20	840	908	1,748	18	(1,253)		1,253
725	Berlin	4,149	4-20	718	685	1,403	180	430	439	869
726	Chippewa Falls	8,670	4-20	1,391	1,647	3,038	960	455	545	1,100
727	Eau Claire	17,415	4-20	2,713	2,723	5,436	1,050	1,610	1,567	3,177
728	Fond du Lac	12,024	4-20	2,442	2,417	4,859	800	1,176	1,118	2,294
729	Fort Howard	4,754	4-20	786	796	1,582	250	453	450	903
730	Green Bay	9,069	4-20	1,357	1,329	2,686	500	710	672	1,382
731	Janesville*	10,836	4-20	.....	.....	.....	300	802	865	1,667
732	Kenosha*	6,532	4-20	979	827	1,806	480	354	358	712
733	Lacrosse	25,090	4-20	3,715	3,899	7,614	1,045	2,273	2,189	4,462
734	Madison	13,426	4-20	2,154	2,417	4,571	500	1,032	969	2,001
735	Marinette	11,523	4-20	1,505	1,496	3,001	500	973	977	1,950
736	Menasha	4,581	4-20	775	779	1,569	.....	260	309	569
737	Menomonee	5,491	4-20	857	864	1,721	200	690	630	1,320
738	Merrill	6,809	4-20	697	683	1,380	140	643	605	1,248
739	Milwaukee	204,468	4-20	31,912	32,906	64,820	15,000	(27,784)		27,784
740	Neenah	5,083	4-20	939	1,079	2,018	135	402	606	1,008
741	Oconto	5,219	4-20	700	657	1,357	300	340	380	720
742	Oshkosh	22,836	4-20	3,902	3,906	7,808	2,500	1,315	1,318	2,633
743	Portage*	5,143	4-20	842	843	1,685	250	(887)		887
744	Racine	21,014	4-20	3,653	3,962	7,615	1,166	1,684	1,637	3,321
745	Sheboygan	16,359	4-20	3,118	3,052	6,170	500	1,167	1,222	2,389
746	Stevens Point	7,896	4-20	1,333	1,380	2,713	500	670	653	1,323
747	Waukesha	6,321	4-20	633	638	1,271	191	791	510	1,001
748	Wausau	9,253	4-20	1,353	1,384	2,737	400	906	864	1,770
749	White Water*	4,359	4-20	649	646	1,295	127	343	381	724
	WYOMING.									
750	Cheyenne	11,690	.....	.....	.....	.....	150	516	477	993

*Statistics of 1888-89.

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enrollment, attendance, supervising officers, teachers, etc.—Continued.

Number of days the public schools were actually in session.	Aggregate number of days' attendance of all pupils in public day schools.	Average daily attendance in public day schools.	Number of supervising officers.			Number of regular teachers.			Number of buildings used for school purposes.	Total number of seats or sittings for study in all public schools.	Number of years required to complete entire course of study.	
			Male.	Female.	Total.	Male.	Female.	Total.				
11	12	13	14	15	16	17	18	19	20	21	22	
		2,883.1				(99)		99	3			713
197	154,351	a825	1	0	1	3	24	27	12	1,263	12	714
200	395,202	1,976	2	1	3	2	54	56	11	2,950	12	715
200	127,800	639	1	0	1	3	14	17	4	1,000	11	716
175	154,715	884	1	1	2	5	21	26	4		12	717
160	143,520	897	1	0	1	2	25	27	5	1,500	12	718
193	169,256	905	0	0	0	7	15	22	6		10	719
192	296,256	1,543	1	0	1	8	34	42	10	2,200	13	720
197	822,869	4,177	6	3	9	0	108	108	11	5,000	11	721
175	224,486	1,283	3	0	3	8	36	44	8		12	722
176.5	141,355	810	1	0	1	1	19	20	3	900	12	723
195	166,633	854	1	0	1	1	23	24	4	1,000	12	724
180	108,241	601	1	3	4	(20)		20	4	1,020	14	725
175	166,334	950	1	0	1	2	25	27	7	1,200	12	726
180	371,107.5	2,061.7	1	0	1	8	54	62	15	2,766	12	727
197	335,275	1,701	1	0	1	0	46	46	18	2,800	12	728
			1	0	1				19	5	1,300	13	729
198	202,470	1,024	0	1	1	1	27	28	6	1,500	13	730
190	230,850	1,215	1	0	1	2	40	42	6	1,705		731
						1	15	16	4	740		732
196	626,962	3,199	1	2	3	8	75	83	13	4,097	11	733
180	295,448	1,641	1	1	2	2	44	46	9	1,900	12	734
196.5	230,990.5	1,175.5	1	0	1	3	28	31	5	1,600	12	735
188	56,444	300	0	0	0	1	11	12	7	600	12	736
180	165,008	916.7	1	1	2	1	27	28	7	1,250	12	737
178	118,422	665.3	1	0	1	1	20	21	4	1,080		738
195	3,609,315	19,406	33	4	37	32	430	462	36	23,876	12	739
185	133,297	720.5	0	0	0	1	18	19	5	1,200	12	740
200	109,000	545	5	0	5	5	10	15	4	800		741
200	337,231	1,686	2	0	2	9	53	62	9	3,000	10	742
200	113,731	568.6				1	18	19	5	1,210		743
200	509,400	2,547	1	0	1	7	53	60	8	3,000	12	744
195	306,926	1,559	2	0	2	8	32	40	6	2,500	12	745
188	175,697.5	931.5	1	0	1	0	29	29	7	1,456	12	746
184	125,992	684.7	1	1	2	0	18	18	3	950	12	747
180	185,443	1,022	1	0	1	3	23	26	10	1,600	12	748
196	97,909	500.2	2	0	2	2	13	15	2	697		749
187	114,868	650	2	0	2	2	21	23	3	900	12	750

a The small average daily attendance as compared with the total enrollment is due to the rapid growth of the city and of the schools.

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TABLE 2.—*Statistics of public evening schools in cities and villages containing over 4,000 inhabitants.*†

	City.	Number of such schools.	Number of evenings the schools were actually in session.	Number of teachers.			Number of different pupils enrolled.			Aggregate number of evenings' attendance of all pupils.	Average daily attendance.	Number of pupils who did not attend the day schools at any time during the year.
				Male.	Female.	Total.	Male.	Female.	Total.			
	1	2	3	4	5	6	7	8	9	10	11	12
	CALIFORNIA.											
1	Los Angeles	1	172	1	0	1	99	0	99	3,905	22	------
2	Oakland	3	201	4	1	5	458	57	510	21,305	178	510
3	Sacramento	1	180	1	1	2	120	42	162	------	88	262
4	San Francisco	5	200	13	32	45	3,402	341	3,743	267,547	1,337	3,355
5	San Jose	1	200	2	0	2	194	30	194	9,200	48	------
	COLORADO.											
6	Denver, district No. 1	1	89	(5)		5	------	------	------	------	------	------
	CONNECTICUT.											
7	Bridgeport	2	71	2	0	2	84	0	84	------	38	------
8	Hartford	2	58	5	8	13	(538)		538	------	132	------
9	New Britain	4	51	4	6	10	(390)		390	------	90	------
10	New Haven	12	76	24	1	25	(1,090)		1,090	------	244	------
11	Waterbury	4	55	1	14	15	(627)		627	------	240	------
	DELAWARE.											
12	New Castle	1	60	0	2	2	25	0	25	------	------	22
13	Wilmington	2	65, 75	0	5	5	(115)		115	4,695	95	115
	DISTRICT OF COLUMBIA.											
	Washington:											
14	First six divisions *a*	10	*c*56	11	13	24	1,224	128	1,352	24,139	422	------
15	Seventh and eighth divisions *b*	5	55	7	13	20	493	665	1,158	34,707	304	1,128
	GEORGIA.											
16	Columbus	1	120	1	1	2	65	50	115	------	------	115
	ILLINOIS.											
17	Braidwood	1	------	1	0	1	------	------	------	------	------	------
18	Chicago	38	118	175	47	222	7,948	1,879	9,827	393,540	3,496.9	------
19	Peoria*	5	100	3	2	5	340	196	496	------	263	------
	INDIANA.											
20	Goshen	1	80	2	0	2	35	20	55	2,400	20	50
21	Lafayette	1	90	------	------	------	------	------	------	------	72	------
22	Marion	1	80	1	0	1	------	------	------	------	------	------
23	Peru	1	75	1	0	1	30	10	40	------	15	30
24	South Bend	1	60	1	0	1	42	0	42	------	24	------
25	Terre Haute	1	95	1	0	1	34	20	54	2,090	22	54
	IOWA.											
26	Cedar Rapids*	2	97	0	2	2	87	0	87	------	35	------
27	Clinton	1	40	1	0	1	73	22	95	1,160	29	------
28	Davenport	2	78	2	2	4	174	19	193	5,680.1	71.9	193
29	Des Moines, West	5	58	3	2	5	119	42	161	4,463	77.5	161

* Statistics of 1888-89.

† For expenses of evening schools, see p. 1358 *et seq.*, Table 4, column 16.

a White pupils.

b Colored pupils.

c One school was in session 57 evenings and another 27 evenings.

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TABLE 2.—*Statistics of public evening schools in cities and villages containing over 4,000 inhabitants*—Continued.

	City.	Number of such schools.	Number of evenings the schools were actually in session.	Number of teachers.			Number of different pupils enrolled.			Aggregate number of evenings' attendance of all pupils.	Average daily attendance.	Number of pupils who did not attend the day schools at any time during the year.
				Male.	Female.	Total.	Male.	Female.	Total.			
	1	2	3	4	5	6	7	8	9	10	11	12
	KANSAS.											
30	Salina	2	60	1	4	5	7	19	26	901	15	20
	KENTUCKY.											
31	Covington	2	80	3	0	3	80	40	120	----	----	----
32	Louisville	6	77	4	34	38	(1,513)		1,513	----	894	----
	MAINE.											
33	Augusta	1	36	2	5	7	(125)		125	3,564	99	100
34	Bath	1	----	5	0	5	63	0	63	----	59	60
35	Biddeford	1	16	2	2	4	95	140	235	2,700	110	235
36	Lewiston	2	70	5	5	10	114	80	194	11,340	162	194
	MASSACHUSETTS.											
37	Boston	a22	108	88	84	172	(7,598)		7,598	316,008	2,926	----
38	Brockton	2	49	3	6	9	(434)		434	----	----	434
39	Brookline	1	72	(5)		5	(119)		119	----	69	----
40	Cambridge	4	200	18	21	39	659	281	940	20,183	423	940
41	Chelsea	2	76	3	7	10	(458)		458	13,706	104	458
42	Chicopee	4	----	(29)		29	(547)		547	----	497.5	547
43	Clinton	1	48	1	10	11	209	115	324	5,424	113	324
44	Danvers	1	22	1	1	2	13	7	20	----	13.7	20
45	Dedham	1	20	2	2	4	12	18	30	304	15.2	0
46	Everett	1	70	2	1	3	85	30	115	2,730	39	100
47	Fall River	14	61	25	81	106	1,530	770	2,300	108,031	1,771	----
48	Fitchburg	3	45	6	22	28	(392)		392	2,395	53	----
49	Framingham	1	73	(5)		5	(127)		127	----	65	----
50	Haverhill	4	60	(b13)		b13	(380)		380	----	266	266
51	Holyoke	6	40	16	44	60	741	549	1,290	51,600	736	50
52	Hyde Park	2	60, 70	3	2	5	144	44	188	----	46	----
53	Lawrence	20	55	15	23	38	657	335	992	----	469	992
54	Lowell	9	74	19	79	98	1,961	1,485	3,446	----	1,536	----
55	Lynn	8	82	8	14	22	314	166	480	15,720	275	476
56	Malden	2	80	5	4	9	156	99	255	11,760	147	253
57	Melford	1	50	3	2	5	90	18	108	----	59	108
58	Milford	1	64	1	0	1	32	4	36	1,536	24	30
59	Natick	2	35	(10)		10	(175)		175	----	39	----
60	New Bedford	4	80	6	45	51	(1,364)		1,364	60,800	760	----
61	Newburyport	2	27	1	7	8	60	44	104	1,539	57	103
62	Newton	2	30	2	6	8	81	110	191	----	57	----
63	North Adams	8	39	1	7	8	(304)		304	9,867	253	----
64	Northampton	7	60	1	11	12	129	68	197	7,390	135	178
65	Pittsfield	1	64	3	1	4	146	65	211	----	44.7	200
66	Quincy	2	89	(2)		2	110	8	118	----	----	----
67	Salem	3	178	4	16	20	530	223	753	----	297	----
68	Somerville	4	45	10	6	16	(306)		306	7,910	178	----
69	Southbridge	6	30	5	3	8	151	156	307	6,192.9	206.4	304
70	Spencer	6	48	2	8	10	206	0	206	----	180	206
71	Springfield	5	(c)	6	18	24	716	182	898	----	----	----
72	Taunton	4	36	1	11	12	183	153	336	6,588	183	----
73	Waltham	3	145	5	5	10	209	106	315	----	138	----
74	Watertown	1	22	1	3	4	(71)		71	----	27	71
75	Westfield	1	39	1	3	4	(91)		91	----	32	----
76	Woburn	1	50	2	2	4	80	34	114	----	73	103
77	Worcester	12	78	21	33	54	658	93	751	35,225	452	598

a Including five evening drawing schools.
b Average number.
c The five schools were in session 132, 67, 34, 32, and 106 evenings, respectively.

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TABLE 2.—*Statistics of public evening schools in cities and villages containing over 4,000 inhabitants*—Continued.

	City.	Number of such schools.	Number of evenings the schools were actually in session.	Number of teachers.			Number of different pupils enrolled.			Aggregate number of evenings' attendance of all pupils.	Average daily attendance.	Number of pupils who did not attend the day schools at any time during the year.
				Male.	Female.	Total.	Male.	Female.	Total.			
	1	2	3	4	5	6	7	8	9	10	11	12
	MICHIGAN.											
78	Ann Arbor	1	65	1	0	1	27	3	30	.....	24	15
79	Detroit	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
80	Grand Rapids	1	115	2	2	4	(271)		271	5,879	52	271
81	Jackson, Dist. No. 1	2	120	1	1	2	92	32	124	5,160	43	.....
82	Lansing	2	.....	2	0	2	.....	.....	.....	.....	.....	.....
83	Muskegon	1	75	2	1	3	191	11	202	.....	60	201
	MINNESOTA.											
84	Duluth	3	79	2	1	3	(412)		412	.....	105	.....
85	Minneapolis	9	73	48	0	48	1,285	465	1,750	52,082	761	1,750
86	St. Paul	11	100	24	12	36	(1,639)		1,639	.....	596	.....
87	Stillwater	1	60	0	1	1	(36)		36	1,080	18	36
88	Winona	4	100	2	2	4	187	20	207	.....	70	150
	MISSOURI.											
89	St. Louis	7	60	21	33	54	2,525	264	2,789	71,905	1,271	1,271
	NEBRASKA.											
90	Grand Island	1	170	0	1	1	18	49	67	.....	23	60
	NEW HAMPSHIRE.											
91	Concord	1	60	0	2	2	(70)		70	.....	21	70
92	Dover	2	96	2	3	5	73	42	115	4,128	43	93
93	Keene	1	75	0	1	1	50	10	60	1,875	25	60
94	Manchester	6	100	7	10	17	523	323	846	.....	177	740
95	Nashua	3	.....	4	15	19	(524)		524	.....	241	.....
96	Portsmouth	1	25	4	0	4	84	0	84	.....	.....	35
	NEW JERSEY.											
97	Camden	5	72	6	13	19	350	220	570	.....	425	.....
98	Elizabeth	1	40	1	4	5	202	0	202	.....	103	.....
99	Gloucester	2	60	2	2	4	(185)		185	.....	97	185
100	Harrison	1	91	3	4	7	230	200	430	25,800	380	430
101	Hoboken	1	69	2	7	9	343	80	423	.....	177	423
102	Millville	3	63	3	9	12	364	20	384	.....	236	*a*346
103	New Brunswick	1	36	1	3	4	100	20	120	.....	65	120
104	Newark	7	100	33	32	65	2,564	583	3,147	.....	1,459	3,147
105	Passaic	5	120	2	3	5	(310)		310	18,720	156	310
106	Paterson	11	44	11	60	71	2,045	947	2,992	.....	1,094	.....
107	Plainfield	2	(*b*)	2	7	9	115	52	167	1,857	(*c*)	167
108	Salem	1	100	1	1	2	65	0	65	2,300	23	65
109	Trenton	5	91	1	17	18	740	188	928	33,670	370	.....
	NEW YORK.											
110	Brooklyn	15	(*d*)	(209)		209	(11,267)		11,267	.....	4,361	.....
111	Buffalo	15	41	18	69	87	1,011	883	1,894	.....	1,124	.....
112	Cohoes	9	98	0	12	12	(717)		717	.....	367	717
113	Little Falls	1	150	1	0	1	10	0	10	1,350	9	10
114	Long Island City	3	90	2	7	9	.....	.....	.....	.....	.....	.....
115	New York	28	*e*90	304	123	427	18,873	7,104	25,977	998,580	10,345	*a*20,343

a Estimated.
b The school for males was in session 39 evenings; for females, 12.
c In the school for males, 40; for females, 25.
d The term was from October 7, 1889, to February 7, 1890.
e The three high schools were in session 120 evenings.

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TABLE 2.—*Statistics of public evening schools in cities and villages containing over 4,000 inhabitants*—Continued.

	City.	Number of such schools.	Number of evenings the schools were actually in session.	Number of teachers.			Number of different pupils enrolled.			Aggregate number of evenings' attendance of all pupils.	Average daily attendance.	Number of pupils who did not attend the day schools at any time during the year.
				Male.	Female.	Total.	Male.	Female.	Total.			
	1	2	3	4	5	6	7	8	9	10	11	12
	NEW YORK—cont'd.											
116	Rochester	2	66	2	13	15	(629)		629	18,876	286	0
117	Utica	2	84	0	10	10	428	84	512	12,576	149	512
118	Watertown	1	160	0	2	2	75	0	75	2,176	14	75
119	Yonkers*	3	75	10	4	14	327	125	452	.....	228	.....
	OHIO.											
120	Chillicothe	1	120	2	1	3	(100)		100	10,200	85	.....
121	Cleveland	38	114	28	13	41	1,861	222	2,083	79,937	701.2	.....
122	Columbus	10	40	4	6	10	344	90	434	7,240	181	434
123	Defiance	1	80	0	1	1	70	10	80	.....	41	.....
124	Fostoria	1	.....	1	0	1	20	0	20	.....	.....	.....
125	Fremont	1	40	0	1	1	40	0	40	.....	20	2
126	Nelsonville	1	180	0	1	1	20	25	45	.....	.....	.....
127	Portsmouth	1	60	1	0	1	26	4	30	1,080	18	30
128	Steubenville	6	60	4	2	6	242	22	264	.....	141	264
129	Tiffin	1	.....	1	0	1	(39)		39	.....	.....	.....
130	Xenia	2	100	1	1	2	40	50	90	5,391	55	.....
131	Youngstown	3	60	3	0	3	*a*200	*a*0	*a*200	*a*6,000	*a*100	.....
	OREGON.											
132	Portland	1	75	2	1	3	168	29	197	5,608	74.8	197
	PENNSYLVANIA.											
133	Allegheny	13	60	13	20	33	774	150	924	50,320	629	924
134	Ashland	2	65	2	2	4	71	0	71	3,055	47	10
135	Beaver Falls*	1	60	0	1	1	35	0	35	.....	17	.....
136	Dubois	1	79	1	0	1	45	0	45	.....	13	.....
137	Dunmore	7	60	1	6	7	210	0	210	.....	.....	210
138	Lancaster	4	120	3	5	8	180	80	260	.....	102	.....
139	Mahanoy	3	.....	3	0	3	81	0	81	.....	.....	81
140	Nanticoke	3	80	1	2	3	346	0	346	.....	154	346
141	New Brighton	1	60	2	0	2	20	0	20	900	15	20
142	Philadelphia	54	70	(367)		367	(16,541)		16,541	.....	5,680	.....
143	Pittsburg	24	40	9	51	60	(2,609)		2,609	73,200	1,830	.....
144	Pittston	6	60	0	6	6	290	0	290	11,600	180	290
145	Plymouth	6	60	4	2	6	300	0	300	12,000	200	0
146	Pottsville	1	90	1	0	1	35	10	45	.....	.....	45
147	Reading	8	85	5	3	8	277	60	337	22,865	269	337
148	Scranton	32	80	14	21	35	1,499	148	1,647	74,560	932	1,400
149	Shenandoah	6	80	2	4	6	392	0	392	8,200	205	*b*200
150	Wilkesbarre, District No. 2	4	60	4	0	4	212	0	212	9,600	160	187
	RHODE ISLAND.											
151	Bristol	1	52	1	3	4	57	23	80	.....	28	(*c*)
152	Central Falls	2	50	3	2	5	(149)		149	.....	39.4	.....
153	East Providence	2	80	(4)		4	163	30	193	4,525	57	.....
154	Newport	1	59	0	8	8	73	74	147	3,775	64	(*c*)
155	Pawtucket	5	79	(27)		27	601	188	789	22,892	223	577
156	Providence	11	94	58	141	199	3,007	1,261	4,268	148,560	1,564	(*c*)
157	Westerly	1	51	3	1	4	74	15	89	1,645	32	80
158	Woonsocket	4	50	8	14	22	231	112	343	.....	133	337

* Statistics of 1888-89.
a Approximately.
b Estimated.
c Very few, if any, evening-school pupils attended day schools.

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TABLE 2.—*Statistics of public evening schools in cities and villages containing over 4,000 inhabitants*—Continued.

	City.	Number of such schools.	Number of evenings the schools were actually in session.	Number of teachers.			Number of different pupils enrolled.			Aggregate number of evenings' attendance of all pupils.	Average daily attendance.	Number of pupils who did not attend the day schools at any time during the year.
				Male.	Female.	Total.	Male.	Female.	Total.			
	1	2	3	4	5	6	7	8	9	10	11	12
	TEXAS.											
159	Dallas	1	------	2	0	2	------	------	------	------	------	------
	VERMONT.											
160	Burlington	2	83	2	0	2	73	4	77	2,266	27	------
161	Rutland	1	30	1	4	5	30	10	40	840	28	40
	VIRGINIA.											
162	Norfolk	2	75	2	0	2	150	0	150	8,250	110	150
163	Portsmouth	*a*1	*40	2	0	2	*69	*0	*69	------	*29	------
164	Richmond	9	77	3	8	11	319	0	319	5,852	76	319
	WISCONSIN.											
165	Milwaukee	21	(*b*)	59	14	73	2,332	505	2,837	44,694	1,234	*c*2,750
166	Wausau	1	50	0	2	2	30	4	34	------	61	76

* Statistics of 1888-89.

a The teachers receive no extra compensation for evening-school work; no separate record is kept.

b The schools for boys were open 39 evenings; for girls, 26.

c Estimated.

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TABLE 3.—*Statistics of manual training in city public schools.*

	City.	Number of different pupils who received manual training.	Branch of instruction.	Number of instructors in each branch.	Number of pupils in each branch.	Number of classes.	Grades in which instruction is given.	Number of lessons a week.	Length of each lesson.	Total amount expended for manual training in 1889–90. For teachers.	For materials.	For new tools and repairs.	For incidentals.
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	New Haven, Conn...	a 4,230	Woodwork	1	240	10	Seventh and eighth	One	2 hours	$7,600	b$300	b$100	.....
			Sewing	1	2,500	50	Fourth, fifth, and sixth	One	1 hour				
			Cooking	1	240	20	Seventh and eighth	One	2 hours				
			Mechanical drawing	1	1,250	25	Seventh to twelfth	One	½ hour				
			Free-hand drawing	.....	15,000	.....	All grades	One to three	45 min. to 1 hour				
2	Wilmington, Del	205	Carpentry and joinery	3	140	.....	High school	.....	.....	.....	205	1,500	.....
			Chipping and filing		140	.....	do	.....	.....				
			Drawing		205	.....	do	.....	.....				
			Cooking	10	2,014	126	Seventh and eighth elementary. First, second, and third years high school.	One	1½ to 2 hours	19,225	2,817	2,850	$300
3	Washington, D. C., (first six divisions) c	a 11,622	Sewing	8	5,554	130	Third, fourth, fifth and sixth elementary.	One	1 to 1½ hours				
			Carpentry	9	1,544	144	Seventh and eighth elementary.	{Seventh, two / Eighth, one}	1 and 2 hours				
			Wood turning	1	108	9	First year, high school.	One	1½ hours				
			Molding	1	108	9	Second year, high school.	One	1½ hours				
			Metal work (forging and machine work).	1	80	10	Third year, high school	One	1½ hours				
4	Washington, D. C., (seventh and eighth divisions) d	3,430	Drawing	5	25,468	495	All grades	Two	40 to 60 min	.....	.....	.....	.....
			Cooking	.....	b 500	.....	Seventh and eighth elementary and high school.	.....	.....				
			Sewing	.....	2,495	.....	Third to sixth elementary.	.....	.....				
			Word working	.....	377	.....	Seventh and eighth elementary and first year high school.	.....	.....				

a All pupils study drawing; this number includes those only who take other branches of manual training.
b Estimated.
c White pupils only.
d Colored pupils only.

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TABLE 3.—*Statistics of manual training in city public schools*—Continued.

	City.	Number of different pupils who received manual training.	Branch of instruction.	Number of instructors in each branch	Number of pupils in each branch.	Number of classes.	Grades in which instruction is given.	Number of lessons a week.	Length of each lesson.	Total amount expended for manual training in 1889-'90. For teachers.	For materials.	For new tools and repairs.	For incidentals.
	1	2	3	4	5	6	7	8	9	10	11	12	13
	Washington, D. C.—Continued.		Metal working	.....	58	.....	Second and third year high school.	.....	.....				
5	Chicago, Ill	75	Carpentry and drawing	5	32	.....	High school	.....	.....	$5,532	$87	.....	.....
			Pattern-work		24	.....	....do	.....	.....				
			Foundry		19	.....	....do	.....	.....				
6	Moline, Ill	a2,000	Clay work, paper work in color and form, sewing and wood carving are carried through grades below high school in connection with regular work and by regular teachers.	.....	.....	.....	.....	.....	.....	.....	200	.....	.....
8	Boston, Mass	a14,000	Printing	(b)	162	.....	Grammar and high	.....	.....	.....	.....	.....	.....
			Shoemaking	(b)	114	.....	....do	.....	.....				
			Elementary carpentry	(b)	118	.....	....do	.....	.....				
			Advanced carpentry	(b)	157	.....	....do	.....	.....				
			Modeling	(b)	200	.....	....do	.....	.....				
			Cooking	6	(b)	.....	....do	.....	.....				
			Sewing	29	(b)	.....	Grammar school	.....	.....				
9	Brookline, Mass	c974	Drawing	2	2,007	48	All	Two	20 min. to 1 hour.	.....	.....	$3,000	.....
			Sewing	3	578	23	Grammar	One	1 hour				
			Cooking	1	223	11	....do	One	2 hours				
			Wood working	2	173	8	....do	Two	1 hour				
7	Baltimore, Md	800	Carpentry	8	200	.....	High school	.....	.....	13,550	2,500	7,500	.....
			Wood turning		50	.....	....do	.....	.....				
			Pattern making		50	.....	....do	.....	.....				
			Wood carving		150	.....	....do	.....	.....				
			Molding		50	.....	....do	.....	.....				
			Tin and copper work		200	.....	....do	.....	.....				
			Chipping and filing		70	.....	....do	.....	.....				
			Machine-shop work		30	.....	....do	.....	.....				

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10	Springfield, Mass	246	Bench woodwork	2	179	13	Ninth grammar, first high school year.	One	45 min	2,200	343	358	$144
			Wood turning		16	2	First high school year	Five	1½ hours				
			Wood carving		4	1	....do	Five	1½ hours				
			Pattern making		10	1	....do	Five	1½ hours				
			Molding		6	1	Second high school year	Five	1½ hours				
			Drawing		61	4	Ninth grammar and high school grades.	One in grammar school, five in high school.	45 min				
11	Waltham, Mass	d513	Drawing	1	a2,000	49	First to eleventh, inclusive.	One lesson each two weeks.	1½ hours	348	48	.....	.....
			Sewing	1	429	25	First to ninth, inclusive.	....do	1 hour				
			Carpentry	1	84	7	Seventh to ninth inclusive.	One	1 hour				
12	Watertown, Mass	d212	Drawing	1	917	13	All	Three	30 minutes	.....	.....	.....	.....
			Sewing	1	160	4	Fourth	One	1 hour				
			Wood work	4	52	4	.....	One	1 hour				
13	Winchester, Mass	d213	Drawing	(e)	All	.....	All	Two	15 to 45 minutes	120	50	20	.....
			Carpentry	1	32	2	Eighth and ninth	Two	2 hours out of school.				
			Sewing	1	120	7	Fourth and fifth	Two	45 minutes				
			Cooking	1	60	4	Eighth to thirteenth	One	2 hours				
14	Muskegon, Mich	300	Printing and drawing	1	300	6	Seventh and eighth	.....	.....	.....	12	.....	.....
15	Stillwater, Mich	1,540	Clay modeling	(e)	400	8	First, second, and third	One	1½ hours	0	75	0	5
			Clay carving	(e)	160	8	Fourth, fifth, and sixth	One	1½ hours				
			Paper construction	(e)	400	8	First to ninth	One	1½ hours				
			Sewing	(e)	600	10	....do	One	1½ hours				
			Wood carving	(e)	400	8	Sixth to ninth	One	1½ hours				
			Shop work, wood	1	8	1	High school	Five	45 minutes				
16	Minneapolis, Minn	136	Carpentry and cabinet work.	5	100	.....	....do	.....	.....	5,450	150	100	.....
			Wood carving and turning.		30	.....	....do	.....	.....				
			Metal work		10	.....	....do	.....	.....				
			Drawing		136	.....	....do	.....	.....				
17	Omaha, Nebr	74	Carpentry	1	52	.....	First year high school	.....	.....	1,661	164	70	.....
			Turning	1	23	.....	Second year high school	.....	.....				
			Carving		22	.....	....do	.....	.....				
18	Concord, N. H	391	Sewing	1	300	10	All over 9 years of age	One	1½ hours	635	67	18	129
			Carpentry	1	91	14	All over 13 years of age	One	2 hours				
			Drawing	2	1,720	43	All above third year	One	35 min	1,800	.....	.....	.....
19	Elizabeth, N. J	d875	Clay modeling	1	400	9	Second primary and fourth grammar.	One	40 min. and 1 hour.				
			Wood carving	1	150	5	Second grammar and second high.	One	1 hour				
			Carpentry	1	135	9	Third grammar and first high.	One	1 hour				

d Estimated. b Data not available. c All pupils study drawing; this number includes those only who take other branches of manual training.
d Does not include those who study drawing only. e Taught by regular teachers under the supervision of a special teacher.

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TABLE 3.—*Statistics of manual training in city public schools*—Continued.

	City.	Number of different pupils who received manual training.	Branch of instruction.	Number of instructors in each branch.	Number of pupils in each branch.	Number of classes.	Grades in which instruction is given.	Number of lessons a week.	Length of each lesson.	Total amount expended for manual training in 1889-90. For teachers.	For materials.	For new tools and repairs.	For incidentals.
	1	2	3	4	5	6	7	8	9	10	11	12	13
19	Elizabeth, N. J.—Continued.		Sewing	1	172	9	Third grammar and first high.	One	1 hour				
			Cooking	1	18	1	First and second high	One	1 hour				
20	Montclair, N. J.	1,083	Drawing	1	585	13	All grades	Two	40 min	$1,000	$146	$137	$48
			Clay modeling	1	75	4	Sixth year	Two	45 min				
			Carpentry	1	50	2	Seventh year	Two	45 min				
			Wood carving	1	38	2	Eighth year	Two	45 min				
			Sewing	4	90	4	Sixth and seventh years	Two	45 min				
			Household economy (cooking).	1	34	2	Eighth year	Two	45 min				
			Primary drawing	5	261	5							
21	Paterson, N. J.	10,639	Wood working	1	360	18	First and second grammar and high school.	One	1 hour	2,000	100	150	400
			Mechanical drawing	1	30	1	High school	Two	1 hour				
			Form study and drawing.	(b)	10,639	211	Grammar and primary.	Two in grammar; three in primary.	30 min				
22	Albany, N. Y	600	Wood working (carpentry for boys and slojd for girls).	2	600	25	High school	Two	45 min	1,340	131	.....	36
23	Jamestown, N. Y.	334	Plain sewing, darning	1	112	16	Grammar	Two	45 min	855	.....	.....	.....
			Drawn work, embroidery.	1	25	6	High school	Two	45 min				
			Knitting, crochet work.	1	40	.....	.....	.....	.....				
			Cooking	1	14	2	High school	One	½ day				
			Printing	2	15	3	.....	.....	.....				
			Carpentry	1	84	14	Grammar and high school.	Two	45 min				
			Mechanical drawing	1	24	2	.....	.....	.....				
24	Kingston, N. Y	1,748	Drawing	(b)	1,748	33	All	Five every two weeks.	20 to 40 min	.....	.....	.....	.....
			Molding in clay, etc	(b)	1,484	28	Ninth to first	.....	20 to 30 min				

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			Stick laying, etc.	(b)	755	15	Third primary		20 min					
			Paper cutting, pasting, etc.	(b)	1,484	28	Ninth to first		20 to 30 min					
			Working in wood, cloth, etc.c	(b)										
25	Lansingburg, N. Y.	1,200	Clay molding	1	650	16	Fourth primary	Two	25 min	500	50			
			Paper folding and cutting.	1	980	25	Fourth to tenth	Two	25 min					
26	Newburg, N. Y	2,500	Carpentry	1	123	8	Seventh, eighth, ninth, and tenth years.	One	2 to 2½ hours	2,050	602	63	480	
			Sewing	2	527	35	Second, third, fourth, and fifth years.	One	1 hour					
27	New York, N. Y.	e8,301	Drawing	(d)	2,400	68	All grades	Two to three.	20 to 40 min					
			Work shop	6	1,690	52	First to fifth grammar.	Two	1 hour at least	12,982	4,430			
			Sewing {Grammar grades	7	3,162	82	Fourth to eighth gram-	One	1 hour at least					
			Sewing {Primary grades	7	2,558	103	First to third primary	One	1 hour at least					
			Cooking	2	891	26	Second and third grammar.	One	1 hour at least					
28	Cleveland, Ohio	209	Drawing	419	11,603	179	All grades {Grammar	Four	50 min					
							{Primary	Three	30 min					
			Carpentry and pattern making.	6	125		High school							
			Forging and vice work.		43		do							
			Machine work		41		do							
			Drawing		209		do							
29	Toledo, Ohio	295	Drawing		270		(f)				1,300	232		
			Carpentry and carving	6	120									
			Wood turning and pattern making.		36									
			Forging and brazing		16									
			Machine and shop work		14									
			Sewing and dress making.		78									
			Cooking		20									
		e215	Drawing	(d)	1,700	39	All	Three	45 min	800	125	110		
30	Meadville, Pa		Cooking	1	160	10	Sixth	One	2½ hours					
			Carpentry	1	55	5	High school	Two	1½ hours					
		334	Carpentry and joinery	6	144		First year, high school			21,182	2,300	g2,200		
			Chipping, filing, and fitting.		144		do							
31	Philadelphia, Pa		Pattern making and turning.		102		Second year, high school							
			Smithing, molding, and casting.		108		do							
			Mechanical construction		68		Third year, high school							
			Carpentry	1	40	3	Sixth, seventh, and eighth years.	Three	1 hour	600	200	50	50	
32	Tidioute, Pa	60												

a The first grade is the highest.
b Taught by the regular teachers under the supervision of a special teacher.
c This work is done at the pupils' homes, but under the direction of the teachers.
d Taught by regular teachers.
e Does not include those who study drawing only.
f Students attended public high and senior grammar schools.
g Including books.

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	City.	Number of different pupils who received manual training.	Branch of instruction.	Number of instructors in each branch.	Number of pupils in each branch.	Number of classes.	Grades in which instruction is given.	Number of lessons a week.	Length of each lesson.	Total amount expended for manual training in 1889-90. For teachers.	For materials.	For new tools and repairs.	For incidentals.
	1	2	3	4	5	6	7	8	9	10	11	12	13
32	Tidioute, Pa.—Continued.		Wood turning	1	12	3	Eighth and ninth years.	Three	1 hour				
			Blacksmithing	1	.....	.....	Tenth year	Three	.....				
			Wood carving	1	8	.....	Ninth and tenth years	Two	.....				
			Mechanical drawing	1	75	.....	Sixth to tenth years	One	.....				
33	Westchester, Pa.	80	Wood working	1	80	5	.....	Two and one-half.	1 hour	$450	$14	$28	
34	Knoxville (Slater Training School), Tenn.	214	Sewing	2	154	2	Second and third	Two	1½ hours	1,638	251	245	$43
			Carpentry	1	60	4	....do	Two	1½ hours				
			Housekeeping	3	154	2	Second	One	1 hour				
			Cooking	2	80	5	Second and third	Two	1½ hours				
			Printing	1	40	4	....do	Two	1½ hours				
35	Appleton, Wis.	30	Bench work in wood	1	23	2	High school	.....	.....	450	150	.....	.....
			Wood carving	1	6	1	....do	.....	.....				
			Drawing	1	15	1	....do	.....	.....				
36	Eau Claire, Wis.	70	Bench work in wood	1	56	4	Seventh, eighth, and high school.	Four	1½ hours	765	100	60	.....
			Iron forging	1	8	1	....do	Four	1½ hours				
			Wood carving	1	12	1	High school	Four	1½ hours				
			Mechanical drawing	1	60	4	....do	Three	1½ hours				

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	ALABAMA.								
1	Birmingham	$20,000,000	$30,000,000	$200,000	$8,528	$59,896	.....	86,144	874,563
2	Eufaula	.....	.....	15,000	1,402	763	.....	175	2,340
3	Huntsville	.....	.....	5,000	1,827	1,340	.....	100	3,267
4	Mobile	.....	.....	90,000	.....	.....	.....	.....	.....
5	Montgomery	9,500,000	14,250,000	50,000	4,077	14,500	.....	2,860	21,437
6	Selma	.....	.....	.....	.....	.....	.....	.....	.....
7	Tuscaloosa	*2,500,000	*3,500,000	40,000	2,106	13,357	.....	1,415	16,878
	ARKANSAS.								
8	Fort Smith	4,000,000	8,000,000	.....	2,660	.....	.....	.....	42,055
9	Helena	1,200,000	.....	33,000	1,562	.....	$7,275	897	9,734
10	Little Rock	.....	.....	258,000	6,582	.....	57,394	.....	63,976
	CALIFORNIA.								
11	Eureka	4,019,504	6,699,173	117,640	13,365	5,570	6,069	.....	25,004
12	Los Angeles	45,000,000	135,000,000	648,000	97,657	60,519	54,273	330	212,779
13	Oakland	.....	.....	471,650	107,566	50,060	43,644	19,004	220,274
14	Pasadena	.....	.....	130,000	19,839	.....	8,385	7,375	35,599
15	Riverside*	.....	.....	.....	.....	.....	.....	.....	.....
16	Sacramento	14,000,000	14,000,000	535,300	36,003	40,383	17,146	287	93,819
17	San Diego	16,471,493	24,707,230	197,717	37,835	14,930	18,773	.....	66,538
18	San Francisco	306,041,440	306,041,440	4,757,724	578,697	408,166	.....	5,620	992,483
19	San Jose	.....	.....	233,800	41,037	18,183	16,080	340	75,640
20	Santa Barbara	.....	.....	.....	.....	.....	.....	.....	.....
21	Santa Cruz	3,100,000	4,650,000	50,900	13,964	0	5,305	0	19,269
22	Santa Rosa	3,500,000	3,500,000	31,192	10,534	6,071	3,994	.....	20,599
23	Stockton	9,500,000	9,500,000	210,064	28,807	19,716	18,906	3,784	71,213
24	Vallejo	2,000,000	4,000,000	.....	12,980	.....	8,840	.....	21,821
	COLORADO.								
25	Aspen	2,877,424	2,877,424	60,000	8,176	.....	35,992	226	44,394
26	Colorado Springs	4,552,265	4,552,265	124,000	8,600	31,000	10,000	.....	49,600
27	Denver, district No. 1.*	.....	.....	1,500,000	.....	.....	.....	.....	427,429
28	Denver, district No. 2.	6,236,515	20,788,383	340,000	7,200	54,894	39,530	463	102,087
29	Denver, district No. 17.	.....	.....	.....	30,584	.....	18,150	166	48,900
30	Leadville*	2,986,457	5,972,914	131,500	4,000	.....	34,440	700	39,140
31	Pueblo, district No. 1.	9,313,921	9,313,921	200,000	19,192	20,863	.....	.....	.....
32	Pueblo, district No. 20.	5,662,502	.....	67,500	.....	29,769	15,986	3,765	49,520
	CONNECTICUT.								
33	Ansonia	.....	.....	.....	.....	.....	.....	.....	.....
34	Birminghame	3,842,500	.....	38,090	2,925	8,095	.....	4,210	15,230
35	Bridgeport	21,942,282	43,884,564	338,000	25,646	109,400	0	0	135,046
36	Bristol	3,000,000	5,000,000	52,000	3,472	14,561	352	.....	18,385
37	Danburyc	5,923,000	.....	107,430	7,864	18,010	4,410	.....	30,284
38	Greenwichd	4,533,805	.....	41,100	4,491	9,164	0	0	13,655
39	Hartford*	48,541,890	48,541,890	e1,113,500	22,464	f156,678	.....	48,929	228,071
40	Manchesterd	3,126,071	.....	41,000	4,088	h12,374	.....	1,830	18,292
41	Meriden	.....	.....	344,660	57,862		j9,389	3,294	70,545
42	Middletown	4,000,000	4,000,000	71,000	3,632	18,304	.....	2,128	24,064
43	New Britain	.....	.....	.....	.....	.....	.....	.....	.....

* Statistics of 1888-89.
a Expenses of evening schools are included in columns 14 and 15.
b Salaries of teachers for half month of July, 1886.
c Estimated.
d This report includes the entire town.
e Value of real estate only.

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schools of cities and villages containing over 4,000 inhabitants.

Receipts from loans and bonds.	Balance on hand from last school year (1888-89).	Total sum available for use during the year.	Expenditures for the school year 1889-90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890-91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
		374,508	235,956	239,521	99,188		574,553			1
		2,346		1,225						2
0	0	2,267		2,092	175					3
										4
	3630	22,117		*19,600		0	20,978		31,139	5
										6
0	127	17,905	10,278	6,250	470	0	16,998	0	7	7
	2,385	44,090	30,000				44,000		90	8
0	0			5,740	1,991	0	7,731	0	0	9
	5,601	69,577	18,325	33,822	9,590		61,737		7,840	10
	37,674	82,678	33,704	17,202	7,152		58,058		4,620	11
$200,000	38,905	451,774	212,507	137,443	32,747	$450	383,147		68,627	12
	49,432	269,706	50,408	a154,398	a44,636	(e)	249,442		20,264	13
		35,599		21,267	5,437		26,704		8,895	14
				9,000		0				15
	51,302	165,121	20,479	73,280	20,798		114,557		50,564	16
	50,123	136,891	22,557	44,014	19,330		85,901		50,760	17
	222	992,705	25,321	a804,507	a133,774	(a)	963,602	b328,812	291	18
	34,292	109,932	19,464	50,739	15,219	829	86,251		23,681	19
										20
	10,482	29,671	250	16,802	3,717	0	20,769	0	8,902	21
	6,210	26,809	1,500	14,595	5,355		21,450		5,359	22
	39,329	110,542	16,950	40,427	15,788		73,165		37,377	23
	6,874	28,605		12,490			20,987		7,618	24
45,000	4,670	94,994	32,503	13,394	14,778		60,672		33,392	25
	3,600		20,000	*39,457	*15,275					26
0	80,896	458,295	133,462	122,163	41,562		297,187	10,608	151,108	27
50,425	2,121	185,683	60,667	49,850	21,404		131,921	15,000	8,712	28
68,201	10,167	127,268	71,950	19,981	10,325		102,256		25,012	29
0	0	39,140	700	12,240	16,200	0	29,140	10,000	0	30
93,295		180,980	44,658	24,045	11,101		79,799	65,600		31
	6,377	55,897	14,645	18,917	8,107		41,669		14,228	32
										33
0	0	15,230		9,184	3,703	0	12,887			34
0	0	135,046		83,324	23,004	280		0	0	35
			4,809	16,704	4,933		26,446	2,903		36
0	0	30,284		20,860	10,497		31,357		0	37
0	0	13,655	0	11,716	1,939	0	13,655	0	0	38
10,750	0	228,821	27,378	133,689	44,648	2,329	208,244	0	20,577	39
0	0	18,292		13,714	7,121		20,835		0	40
0	0	70,545	0	47,349	23,547	0	70,896	0	0	41
11,206	1,833	37,997	786	18,602	6,781		21,119	12,901	5,577	42
				23,736	8,455	753	33,944			43

f Includes town and district taxes.
g No balances are carried over.
h Town and district taxes.
i Principally town appropriations.
j District taxes.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	CONNECTICUT—con.								
44	New Haven	$50,739,356	$67,642,475	$874,200	$41,206	$174,336	$69,167	$4,856	$289,565
45	New London	8,000,000	10,666,668	130,000	6,111	24,400	47,800	664	78,975
46	Norwich			167,000	6,899	20,441		1,000	28,340
47	Rockville			80,100	4,392	4,324	318		19,034
48	South Norwalk	2,073,010	4,146,020	50,000	(a)	16,038	a12,113	167	18,318
49	Stamford*b*			140,500	?, 484	29,505		1,008	37,997
50	Thompsonville*				2,576	c3,469	d3,068	557	9,670
51	Torrington*c*	1,254,667		36,840	1,964	11,426		427	13,837
52	Wallingford*c*	1,670,000		41,640					13,956
53	Waterbury			400,000	15,707	89,558		11,006	116,271
54	Willimantic			39,000	4,563	12,963	4,627	2,547	24,702
55	Winsted*c*	2,311,000		23,770	2,196	7,218		302	9,716
	DELAWARE.								
56	New Castle	1,437,000	2,155,500	13,000	807	4,000		31	4,838
57	Wilmington	33,806,453	33,806,453	504,237	9,465	126,788		1,924	138,177
	DISTRICT OF COLUMBIA.								
58	Washington*f*	153,307,541	229,961,311	1,703,075	h328,750	i328,750	0	0	657,500
59	Washington*g*				h124,139	i124,139	0	0	248,278
	FLORIDA.								
60	Key West	3,266,050	4,899,075	19,000	4,613	8,032	1,024		13,669
61	Pensacola	2,765,542	6,913,855	*22,950	2,570				
62	Tampa	2,500,000	3,750,000	12,000					
	GEORGIA.								
63	Americus	*2,400,000	*3,000,000	*41,200	1,117	8,563	375	363	10,418
64	Athens	4,659,957	4,659,957	40,500	2,037	10,335	927	102	13,392
65	Atlanta	*32,000,000	*42,666,667	300,000					
66	Augusta	18,000,000	18,000,000	100,000	1,991	42,800	4,079	2,129	50,999
67	Columbus	*7,142,350	* 7,142,350	110,000	3,618	19,909	952		24,479
68	Griffin	1,500,000		25,000	1,200	2,900	2,206		6,306
69	Macon	12,400,000	16,533,333	98,500					
70	Rome	4,500,000	6,000,000	14,000	1,800	8,000		600	10,400
71	Savannah*			395,500	7,769	54,000	6,399	5,157	73,325
	ILLINOIS.								
72	Aurora								
73	Beardstown	425,000	1,416,667	36,000	1,375			14,516	15,891
74	Belleville	2,424,435	6,061,088	112,000	4,522	31,443	65	365	36,425
75	Bloomington	3,495,854	13,983,416	310,000	6,712	55,956	3,121	17,569	83,356
76	Braidwood			24,270					
77	Cairo	1,911,960	5,735,850	64,000	2,752		14,695		17,477
78	Canton	1,160,146	3,480,438	66,424	1,361	16,243		171	17,775
79	Centralia	700,000	2,800,000	32,000	1,273	11,213		158	12,644
80	Champaign*				1,122	9,323	0	238	10,683
81	Chicago	168,135,831	672,543,324	9,300,000	152,580	3,310,077		264,153	3,726,810
82	Danville	2,000,000	3,000,000		3,034		43,076	201	46,311
83	Decatur	2,229,502	6,688,506	150,000	4,368	40,168		227	44,763
84	East St. Louis			120,900					33,506
85	Elgin			183,300	2,900	44,011		4	46,915
86	Evanston	1,700,000	10,200,000	100,000	784	33,183		1,537	35,504
87	Freeport*	1,679,680	5,878,880	87,226	3,110	24,280	194	141	27,725
88	Galena*	487,601	2,438,005	37,250	2,046	11,731		3,281	17,058

* Statistics of 1888-89.
a Receipts from State taxes are included in column 7.
b This report includes the entire town.
c Town appropriations.
d District taxes.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888–89).	Total sum available for use during the year.	Expenditures for the school year 1889–90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890–91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
$103,274	$64,217	$457,056	$25,157	$199,052	$94,748	$3,574	$322,531	$128,274		44
68,268		147,243	57,000	22,120	7,000	0	86,150		$61,093	45
		28,340		20,161	8,179		28,340			46
		19,034	1,000	13,000	5,034		19,034			47
1,000	1,073	20,391	1,284	10,518	3,493		15,295	5,000	96	48
0	0	37,997	0	30,922	7,075	0	37,997	0	0	49
0	0	9,670		5,036			8,977			50
			5,896	8,146	1,858		15,900			51
0	0	13,956		9,182	4,842		14,024			52
0	0	116,271	19,334	44,985	41,203		105,522			53
		24,702		16,634	8,068		24,702			54
				7,632	2,490		10,122			55
	443	5,281		4,000	1,061	167	5,228		53	56
	21,145	159,322	22,575	78,244	36,358	356	137,527	5,000	21,795	57
0	0	657,500	187,501	370,013	96,986	3,000	657,500	0	0	58
0	0	248,278	67,078	140,588	38,317	2,295	248,278	0	0	59
	8,283	21,952	3,010	12,045	495		15,550		6,402	60
			657	10,153	1,942		12,752	2,386		61
			1,163	5,400	225	0	6,788	0		62
	1,295	11,713		8,565	636		9,200		2,512	63
	4,191	17,583	362	12,227	2,281		14,870		2,713	64
		97,613		70,756			97,613			65
	10,679	71,678	10,000	32,580	12,079		54,659		17,019	66
		24,479		17,300	7,179	500	24,979			67
	990	7,206		3,992			4,477			68
										69
0	3,697	14,097	520	7,845	463	0	8,828	0	5,269	70
0	393	73,718		67,238			71,858		1,860	71
										72
	7,268	23,159	2,417	7,570	3,309		13,296	2,000	7,862	73
	10,121	46,546	2,981	27,725	6,529		37,235		9,310	74
	1,434	84,792	481	38,694	14,649		53,824	15,000	15,968	75
				7,000	2,200					76
	684	18,131	2,512	12,313	3,066		17,791		340	77
11,000	1,171	29,946	354	10,808	4,484		15,646	12,000	2,300	78
	2,627	15,271	694	7,380	2,835		10,909	500	3,832	79
0	3,955	14,638	2,456	7,475	3,233	0	13,164	0	1,474	80
45,053	492,509	4,264,972	872,326	2,079,684	625,048	67,425	3,644,483	60,000	560,489	81
40,895	0	87,206	39,797	27,152	11,611	0	78,560	4,679	3,967	82
	13,642	58,405	8,286	25,646	7,542		41,474			83
20,000	1,446	54,952	22,129	20,886	10,040		53,665		1,287	84
32,446	5,363	84,724	2,246	26,664	10,190	0	39,100	37,479	8,145	85
20,287	12,263	68,054	9,855	17,852	7,790		35,497	18,000	14,557	86
0	2,823	30,548	5,513	18,058	6,513	0	30,084	0	464	87
0	5,534	22,592	2,346	8,039	2,073		12,488	2,600	7,503	88

e Estimated.
f First six divisions—principally white.
g Seventh and eighth divisions—colored.
h United States appropriation.
i From District of Columbia taxes.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	ILLINOIS—cont'd.								
89	Galesburg	$2,628,985	$8,763,283	$225,000	$5,221	$30,000		$870	$36,091
90	Jacksonville			152,650	3,141	39,515	$5	768	33,429
91	Joliet	2,572,259	15,433,554	160,000	6,990	53,010		200	60,200
92	Kankakee	625,807	2,783,858	76,500	2,675	15,622		535	18,832
93	Lasalle	845,643	2,536,929	36,000	1,800	12,000	14,000		27,800
94	Lincoln			85,000					
95	Litchfield			60,000	1,837	10,030		448	12,316
96	Moline	1,753,021	5,259,063	200,000	2,073	(58,386)		1,154	61,613
97	Monmouth	1,000,000	3,000,000	63,500	2,000	18,000			20,000
98	Ottawa	1,219,472	6,097,360	*30,350	2,256	(29,141)		330	31,727
99	Paris	760,771	2,282,313	55,000	901	12,551	0	381	13,832
100	Pekin								
101	Peoria	7,749,346	30,997,384	400,000	10,032	98,839		3,802	113,673
102	Peru			30,000	1,873	10,500	0	0	12,373
103	Quincy	4,794,279	19,177,116	197,200	9,700	40,157		152	50,009
104	Rock Island	2,405,563	7,216,689	120,000	3,609	40,600		400	44,609
105	Rockford	4,691,345	15,637,817	41,454	4,984	47,759		1,608	54,351
106	Springfield	5,539,167	16,617,501	241,172	6,371	65,381	320	11076	73 158
107	Sterling	1,800,000	5,400,000	65,000	1,052	10,038			11,090
108	Streator	1,100,000	6,600,000	40,300	4,074		27,627	310	32,011
109	Waukegan			85,000	1,166	16,901	26,374		44,515
	INDIANA.								
110	Anderson	2,248,455		81,100		(17,442)		0	17,442
111	Bloomington	1,503,180		50,500		(8,473)		0	8,473
112	Brazil	1,555,640	3,111,280	66,030	10,846		3,358		14,204
113	Columbus			70,000		(18,344)		350	18,694
114	Connersville	1,680,000		40,020		(10,608)		273	10,881
115	Crawfordsville	3,000,000		116,000		(20,408)		142	20,550
116	Elkhart	2,367,245		133,500					30,879
117	Evansville	16,752,290		409,500					126,762
118	Fort Wayne	13,189,435	13,189,435	251,010	49,220		63,742	10	113,042
119	Frankfort	2,146,080	5,366,700	58,500	4,755	18,295	1,505	0	24,564
120	Goshen	2,000,000	4,000,000	78,000					19,532
121	Greencastle	2,257,080	2,257,080	81,500	(a)	(a)	a14,202	255	14,457
122	Huntington	1,988,120	5,964,360	71,000	5,408	5,411	11,542	125	22,481
123	Indianapolis	52,800,535	211,202,140	913,800	149,255	121,053	2,901	747	273,956
124	Jeffersonville	2,223,745		100,400		(35,085)		125	35,210
125	Kokomo	2,203,260	5,508,150	60,000	6,530	16,334			22,864
126	La fayette	9,000,000		250,000					55,364
127	La Porte	2,850,720		85,000		(18,751)		67	18,818
128	Lawrenceburg	1,350,000		20,300		(10,530)		14	10,544
129	Logansport	4,038,650	12,205,950	160,000	19,590				
130	Madison			80,600		(20,821)		73	20,894
131	Marion	2,040,000		75,000		(22,397)		0	22,397
132	Michigan City	3,000,000	12,000,000	75,000	7,811	12,492	0	2,405	22,709
133	Mount Vernon	1,305,500		50,000	8,060		5,903		
134	Muncie	2,444,490		183,000					27,662
135	New Albany	8,036,220		167,400		(33,642)		7,867	42,509
136	Peru	1,562,705		75,000	3,931	7,474			11,405
137	Richmond	9,588,720	14,373,080	240,000	15,384	11,336	2,201	33,989	62,910
138	Seymour	1,224,140		51,500	5,271	4,342	215		9,823
139	Shelbyville	2,031,855		36,600		(14,877)		69	14,946
140	South Bend			172,000					42,464
141	Terre Haute	15,701,275	23,551,913	298,541	74,960	3,034	46,396	2,428	126,838
142	Valparaiso	1,617,530	4,043,825	50,000	5,327	4,104			9,431
143	Vincennes	4,274,645	8,549,290	55,000	9,833	2,548		173	12,554
144	Wabash	1,919,835		51,500		(17,347)		28	17,375
145	Washington	1,250,000	3,750,000	42,000	5,991	4,369		133	10,493
	IOWA.								
146	Atlantic			60,000	1,995	11,054		445	13,504
147	Boone			100,000	1,000	18,000			19,000

* Statistics of 1888-89.

a Receipts from State and city taxes are reported with county taxes in column 7.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888-89).	Total sum available for use during the year.	Expenditures for the school year 1889-90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890-91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
	$19,166	$55,257	$11,346	$24,940	$9,000	.....	$45,295	.....	$9,961	89
$310	2,231	35,970	1,175	20,891	6,750	.....	28,816	.....	7,154	90
0	2,475	62,675	2,750	32,000	18,190	0	52,940	$9,000	735	91
1,225	956	21,013	889	11,036	3,884	.....	15,839	3,225	1,949	92
.....	6,500	34,300	4,091	11,052	3,410	.....	18,553	10,000	5,747	93
.....	.....	.....	.....	11,200	2,654	.....	13,854	.....	.....	94
7,800	530	20,646	644	8,474	3,612	0	12,730	7,800	116	95
.....	1,910	63,523	3,337	22,774	16,350	.....	42,431	3,500	17,592	96
.....	.....	20,000	.....	.....	.....	.....	15,000	.....	.....	97
0	12,412	44,139	11,303	19,742	4,712	0	35,757	0	8,382	98
0	8,385	22,218	3,480	10,014	3,487	.....	16,981	.....	5,237	99
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100
41,000	2,163	156,826	6,314	70,431	.....	$1,268	98,839	.....	.....	101
0	0	12,373	500	9,750	1,200	0	11,450	500	423	102
34,918	5,817	55,826	7,852	36,521	9,714	.....	54,087	.....	1,739	103
.....	.....	79,527	22,000	26,260	10,000	.....	68,260	5,000	16,267	104
.....	12,130	66,481	8,339	39,980	11,798	.....	60,117	.....	6,364	105
.....	13,641	86,799	12,696	51,843	3,417	.....	67,756	.....	19,043	106
.....	5,948	17,038	.....	7,637	1,608	.....	9,245	2,000	5,793	107
.....	8,189	40,200	.....	18,992	5,943	.....	24,935	500	14,765	108
.....	.....	44,515	31,850	10,090	2,575	.....	44,515	.....	.....	109
15,200	5,384	38,026	15,896	8,055	6,516	0	30,467	0	7,559	110
.....	3,229	11,702	.....	5,585	3,108	0	8,693	0	3,009	111
.....	1,799	16,003	3,050	8,010	2,892	.....	13,952	.....	2,051	112
0	14,744	34,438	3,070	10,980	3,393	0	17,443	0	15,995	113
.....	8,027	18,908	.....	7,548	1,895	0	9,443	0	9,465	114
0	14,340	34,930	2,000	12,001	3,897	0	17,898	.....	17,032	115
.....	7,462	38,341	.....	21,284	6,319	.....	27,603	.....	10,738	116
.....	20,881	147,643	.....	83,390	.....	.....	122,485	.....	25,158	117
.....	40,805	153,847	4,200	59,350	10,924	.....	74,474	.....	79,373	118
.....	6,556	31,120	3,048	10,880	4,587	.....	18,515	.....	12,605	119
.....	9,088	28,627	600	12,542	3,023	250	17,045	1,800	9,812	120
.....	10,145	24,602	.....	9,807	3,739	.....	13,546	.....	11,056	121
b 25,450	10,031	57,962	1,825	12,883	3,489	0	18,197	0	c 39,765	122
220,000	0	493,956	50,797	204,927	66,595	.....	322,289	126,268	45,397	123
0	28,641	63,851	0	15,484	6,372	0	21,856	0	41,995	124
12,000	824	35,688	3,887	13,019	3,794	.....	20,700	.....	14,998	125
.....	38,779	94,163	28,159	27,787	7,219	.....	63,165	.....	30,998	126
0	19,309	38,187	800	16,358	5,060	0	22,218	0	15,969	127
0	7,844	18,388	0	6,806	2,854	0	9,660	.....	8,728	128
.....	6,905	32,039	12,651	19,598	3,595	.....	35,844	.....	.....	129
0	13,706	34,600	.....	13,817	5,638	.....	19,455	.....	15,145	130
40,000	7,444	69,841	19,800	11,538	6,134	0	37,472	.....	32,369	131
0	10,912	33,621	.....	11,700	4,853	0	16,553	0	17,068	132
.....	8,142	.....	.....	8,268	4,853	.....	13,121	.....	9,984	133
19,985	17,949	65,603	26,026	16,192	5,669	.....	47,887	.....	17,716	134
0	32,565	74,074	0	26,610	9,538	0	36,148	0	37,926	135
.....	.....	11,405	0	11,700	1,400	.....	13,100	.....	.....	136
.....	28,013	90,923	4,078	34,320	13,179	.....	51,577	5,000	34,346	137
.....	3,955	13,783	.....	8,769	2,505	.....	11,274	.....	2,509	138
0	6,714	21,660	0	8,400	3,330	0	11,730	0	9,930	139
.....	38,919	.....	10,000	26,942	.....	.....	43,709	.....	.....	140
.....	13,159	139,997	23,414	67,704	17,534	100	108,752	.....	31,245	141
.....	.....	.....	.....	10,250	4,166	0	14,416	0	4,208	142
.....	20,596	33,150	.....	12,831	2,861	.....	15,692	.....	17,458	143
.....	9,735	27,110	.....	10,025	4,833	0	14,858	0	12,252	144
.....	.....	10,493	150	7,815	1,924	.....	9,889	.....	604	145
10,050	7,874	31,438	2,700	11,185	7,062	.....	20,947	.....	10,491	146
.....	.....	19,000	.....	16,000	2,000	.....	18,000	.....	1,000	147

b For a high school building.
c Includes $25,450 raised for a new building.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	IOWA—cont'd.								
148	Burlington*	$5,000,000	$16,666,667	$150,000					
149	Cedar Rapids								
150	Clinton	1,890,000			$5,192	$33,266		$90	$38,548
151	Council Bluffs	5,869,523	14,673,897		2,712		$62,626		65,338
152	Creston*	1,000,000	2,500,000	103,500	2,500	(26,000)			28,500
153	Davenport	4,614,630	13,843,890	310,000	a10,633	69,999	(a)	1,195	81,828
154	Des Moines, East	2,756,820	5,513,640	207,500	8,179	49,048		260	50,487
155	Des Moines, West	8,122,410	20,306,250	500,000	10,729	102,468		802	113,999
156	Dubuque	17,000,000	42,500,000	230,000	10,516	55,771		79	66,366
157	Fort Dodge*	802,743	2,403,229	50,100	2,860		13,027	323	16,210
158	Fort Madison	1,850,000	7,400,000	44,000	3,100	11,225	175		15,500
159	Iowa City	1,800,000	3,600,000	60,000					28,564
160	Keokuk	3,320,408	6,640,816	110,000					
161	Le Mars	787,298	2,361,894	52,000	1,813	0	14,134	121	16,068
162	Lyons	632,487	1,897,461	43,000	2,114		9,435		11,549
163	Marshallton	2,450,190	7,350,570	100,000	3,527	31,312		442	35,281
164	Mason City								
165	Muscatine			112,255	4,162	(28,265)		139	32,566
166	Oskaloosa*	1,182,752	2,956,868	118,674	2,392		16,814	9,229	28,436
167	Ottumwa	3,487,508	6,975,016	125,000	4,976		35,461		40,437
168	Sioux City			500,000	17,518	(70,806)		79,348	167,672
169	Waterloo (east side).	612,924		42,000	1,681		12,102	121	13,904
	KANSAS.								
170	Atchison	3,094,480	12,377,920	166,000	5,662		32,363	516	38,541
171	Emporia	1,500,000	2,500,000	135,967	3,223		21,258	93	24,634
172	Fort Scott	2,250,000		110,000	2,366	28,453		424	31,243
173	Hutchinson	1,903,558	7,854,202	150,000	2,463	18,706			21,169
174	Junction City			56,840					
175	Kansas City	10,624,000	35,413,333	255,350	10,544	65,818			76,362
176	Lawrence	1,896,021	6,320,070		3,847	20,967		3,142	27,956
177	Leavenworth	5,361,800	13,404,500	198,000	7,404	47,667		3,148	58,219
178	Newton	1,423,008	7,115,043	100,000	1,910	(28,460)		948	32,318
179	Ottawa	1,427,542	5,710,168	55,000	2,244	18,914	4,016		25,174
180	Parsons			125,000					
181	Pittsburg	765,000	2,295,000	84,000					
182	Salina	1,546,742	6,186,969	87,500	2,166	23,575			25,741
183	Topeka	9,434,858	37,739,432	400,000	11,737		72,973	239	84,949
184	Wellington	1,200,000	3,600,000	65,000	1,850	(16,500)		150	18,500
185	Wichita	9,815,792	29,447,376	395,050	8,159	72,561		3,510	84,230
186	Winfield	1,152,978	3,458,934	80,000	2,106	(23,005)		169	25,280
	KENTUCKY.								
187	Ashland			17,971	1,541			4,072	5,613
188	Bowling Green	2,750,000	2,750,000	38,000	4,500	9,000			13,500
189	Covington	14,000,000	21,000,000	205,800					68,874
190	Dayton	1,150,000	1,150,000	20,000	2,948	5,398			8,346
191	Henderson	3,000,000	4,500,000	64,800	5,000	10,000		2,700	17,700
192	Hopkinsville	1,312,000	1,968,000	15,000	2,100	6,500		300	8,900
193	Lexington	12,000,000	16,000,000	150,000	13,000	27,000			40,000
194	Louisville	76,209,200	114,400,800	1,042,645	142,930	226,755		7,574	377,259
195	Newport	8,000,000	8,000,000	185,000	16,671	20,169		11	36,851
196	Owensboro	3,000,000	6,000,000	100,000	5,443	17,026		618	23,087
197	Paducah*			90,000	10,179	10,000	0	600	20,779
198	Paris*			d11,000	1,000	6,000			
	LOUISIANA.								
199	New Orleans				37,000	142,083		8,338	188,027
200	Shreveport	4,000,000	8,000,000	5,000					

* Statistics of 1888-89.
a Receipts from county taxes are included in column 5.
b Account overdrawn.
c The receipts are for the year ended January 1, 1890; the expenditures for the year ended July 1, 1890.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888-89).	Total sum available for use during the year.	Expenditures for the school year 1889-90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890-91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
.....	$5,938	.....	.....	$48,900	$18,530	.....	$67,430	.....	.....	147
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	149
.....	11,181	$49,729	$7,903	24,512	12,966	.....	44,381	.....	85,348	150
.....	44,367	109,705	.....	43,548	23,938	.....	66,485	$2,500	40,720	151
.....	.....	.....	.....	15,160	7,550	0	.....	.....	.....	152
.....	27,081	108,909	544	63,244	9,904	$727	74,419	.....	34,490	153
.....	16,260	73,748	2,510	35,927	17,919	.....	56,356	.....	17,392	154
$40,002	.....	154,001	30,652	63,729	32,242	440	127,063	13,000	13,938	155
.....	8,496	74,862	12,604	45,779	13,969	.....	72,352	.....	2,510	156
0	9,904	26,114	348	9,765	3,022	0	13,135	3,000	9,979	157
.....	.....	.....	.....	8,200	5,100	.....	.....	.....	3,000	158
.....	4,647	33,211	.....	14,746	7,479	.....	22,225	4,000	6,986	159
.....	.....	.....	.....	27,263	19,047	.....	.....	.....	.....	160
7,000	3,630	26,698	5,135	10,916	4,657	0	20,708	0	5,990	161
.....	4,154	15,703	306	8,594	2,139	.....	11,039	920	3,744	162
65,351	14,601	115,233	17,494	23,838	12,952	.....	54,284	57,000	3,949	163
.....	.....	.....	.....	.....	.....	*	.....	.....	.....	164
.....	3,585	36,151	460	25,250	6,617	.....	32,333	1,500	2,318	165
0	2,042	30,478	.....	17,329	5,038	0	23,317	.....	.....	166
.....	2,987	43,424	9,003	22,084	12,337	.....	43,424	.....	.....	167
0	33,421	201,093	78,761	58,480	30,234	0	167,475	.....	33,618	168
4,500	2,264	20,668	5,289	9,358	3,585	0	18,232	0	2,436	169
.....	.....	38,541	1,378	20,234	11,425	.....	33,037	.....	5,504	170
.....	5,583	30,217	2,628	23,528	2,737	.....	28,893	.....	1,324	171
0	0	31,243	.....	16,036	4,857	.....	20,893	6,237	4,113	172
70,912	.....	92,082	59,309	21,069	7,024	.....	87,402	5,190	50	173
.....	.....	.....	.....	8,355	.....	.....	11,591	.....	.....	174
33,970	48,307	158,639	73,651	50,316	25,417	.....	149,384	9,000	255	175
33,148	7,547	71,651	20,291	16,768	8,185	.....	45,244	4,000	22,407	176
4,000	9,116	71,335	.....	38,637	11,671	.....	50,308	7,850	13,177	177
.....	4,878	37,196	1,624	13,363	3,442	.....	18,429	9,760	9,007	178
.....	8,658	33,832	15	11,787	11,517	.....	23,319	10,000	513	179
.....	.....	.....	.....	14,498	.....	.....	26,659	.....	.....	180
.....	.....	.....	4,000	8,730	3,920	.....	16,650	.....	.....	181
.....	5,481	31,222	855	13,296	7,372	.....	21,523	1,000	8,699	182
3,500	9,707	98,156	12,975	65,127	31,899	0	110,001	0	.....	183
0	0	18,500	.....	11,115	3,500	0	14,615	4,000	0	184
101,625	19,180	205,035	84,397	48,509	22,963	.....	155,869	5,002	44,164	185
.....	2,785	28,065	386	12,758	6,803	.....	19,947	1,000	7,118	186
.....	453	6,066	906	.....	786	.....	5,972	.....	94	187
.....	0	.....	6,000	12,600	1,500	.....	.....	.....	.....	188
.....	5,875	74,746	.....	45,000	10,707	488	56,195	6,678	11,890	189
.....	568	8,914	179	5,221	527	.....	5,927	2,085	902	190
900	2,340	20,940	300	15,500	2,460	0	18,260	0	1,680	191
.....	1,500	10,400	.....	7,150	550	.....	7,700	.....	.....	192
.....	.....	40,000	.....	30,000	9,000	.....	39,000	.....	1,000	193
.....	c14,616	c391,875	4,470	255,506	65,916	5,522	c331,414	.....	c64,251	194
0	1,668	38,519	0	28,915	7,871	0	36,786	0	1,733	195
0	4,829	27,916	5,667	13,907	2,099	0	21,673	0	6,243	196
0	3,223	24,002	6,829	14,100	2,361	0	23,290	0	712	197
.....	100	.....	3,300	5,850	.....	.....	.....	.....	.....	198
146,000	632	335,259	0	212,804	33,068	0	245,872	89,500	c0	199
.....	.....	.....	.....	.....	.....	.....	7,288	.....	.....	200

d One building was recently destroyed by fire.
e Overdraft, $113.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	MAINE.								
201	Auburn	$5,000,000	$5,000,000	$78,000	$5,000	$22,000			$27,000
202	Augusta	4,893,110	6,521,148	77,000	4,960	11,333	$5,610		21,903
203	Bangor	10,000,000		125,000	10,090				43,588
204	Bath	6,003,165	8,004,220	135,000	4,836	13,250			18,314
205	Belfast*			13,500	2,625	9,079			
206	Biddeford	6,307,630	12,615,260	160,000	8,359	18,000			26,359
207	Brewer			28,000	1,775	3,135		$58	4,968
208	Calais	2,000,000	2,666,667	30,000	4,600	7,000		150	11,750
209	Ellsworth*	1,640,562	2,460,843	35,000	3,016	4,200			7,216
210	Gardiner			65,000	2,671	5,602		155	8,428
211	Lewiston	10,687,832	10,687,832	232,000	12,505	61,400	375	558	74,738
212	Portland	34,626,335	51,939,503	373,000	21,853	88,585	0	0	110,438
213	Rockland	4,333,904	4,333,904	49,000	3,924	12,231		250	19,755
214	Saco	3,314,303	4,971,459	47,000	5,967	8,000			13,967
215	Waterville			51,350	4,378	7,500			11,878
	MARYLAND.								
216	Baltimore	297,000,000	297,000,000	2,552,254	162,142	707,181		3,576	872,899
217	Frederick	4,500,000	6,750,000	25,000	2,900		3,600	680	7,180
218	Hagerstown	4,156,000	6,234,000	44,900	3,816		7,622		11,448
	MASSACHUSETTS.								
219	Adams *c*	3,500,000	5,250,000	112,000					
220	Amesbury *c*	4,200,000	5,600,000	45,000	83	15,000			15,083
221	Attleboro	3,965,377	5,948,066	90,000	76	15,741		99	15,916
222	Beverly *c*	13,911,425	13,911,425	250,000	0	26,000	0	1,740	27,740
223	Boston	795,466,544	795,466,544	*d*8,750,000	0	2,225,576	0	40,763	2,266,339
224	Brockton	17,372,417	17,372,417		0	65,698	0	0	65,698
225	Brookline	42,533,300		392,500					
226	Cambridge	67,471,925		910,000		398,264		713	398,977
227	Chelsea	20,189,850	20,189,850	415,000		96,500		1,367	97,867
228	Chicopee	6,072,300		*58,200	90	25,025	0	72	25,187
229	Clinton	5,841,435	5,841,435	114,475					27,000
230	Danvers	3,794,525	3,794,525	49,500	45	17,972		880	18,897
231	Dedham	5,285,000	7,929,000	83,000		41,655			41,655
232	Everett	7,210,300	7,210,300	110,300	38	30,617		21	30,676
233	Fall River	49,841,691	49,841,691	1,003,550		183,966		3,372	187,338
234	Fitchburg	15,476,206	20,634,940	289,015		75,627			75,627
235	Framingham	7,501,500				24,500			
236	Gardner	4,136,802	4,136,802	70,000	54	15,000	0		15,054
237	Gloucester	13,411,033	16,763,854	280,000		96,228		218	96,446
238	Haverhill	17,166,392				64,282	854		65,136
239	Holyoke	22,073,825	31,534,035	323,614		71,216		1,201	72,417
240	Hyde Park	7,470,115	7,470,115	120,000	71	32,400			32,471
241	Lawrence	30,000,000	30,000,000	800,000		87,000		287	87,287
242	Lowell	59,742,419	59,742,419	*625,000		185,000		35,117	220,117
243	Lynn	40,024,867	40,024,867	560,000		149,640		61	149,701
244	Malden	16,133,528	16,133,538	362,810	27,528	71,689			99,217
245	Marblehead	4,016,061	4,016,061	58,410	59	18,000			18,059
246	Marlboro	5,474,090	7,298,787	100,000	75	39,761			39,836
247	Medford	9,279,715	13,919,573	120,000	65	43,966			44,031
248	Melrose	6,435,620				21,619			
249	Milford	4,871,754	4,871,754	*94,300	57	23,803	384	38	24,282
250	Natick	5,314,300				23,506			
251	New Bedford	34,647,669	34,647,669	*512,550		118,500		1,269	19,819
252	Newburyport	9,228,535	12,304,713		80	23,883		828	124,791
253	Newton	35,000,000	35,000,000	588,000		121,700			121,700
254	North Adams	5,883,647	8,825,471	169,400	118	37,100	277		37,495
255	Northampton	9,700,000	9,700,000	154,000	97	36,210	699	244	37,250
256	Peabody	*7,033,650							

* Statistics of 1888-89.
a Deficit, $242.
b Deficit, $525.
c This report includes the entire town.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888–89).	Total sum available for use during the year.	Expenditures for the school year 1889-90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890-91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
		$27,000		$20,000	$7,000					201
0	0	21,903		16,832	4,674	$387	$21,893	$252	*a*0	202
							38,992			203
		18,314		13,914	4,400		18,314			204
		11,704					11,343		$361	205
		26,359		24,357	5,784		30,141			206
		4,968					5,943		60	207
		11,750		9,500	2,250		11,750			208
0	$101	7,317					7,028		289	209
		8,428	$5,000				8,419		9	210
		74,738	30,000	27,145	15,583	1,500	74,228		610	211
0	0	110,438	5,000	76,000		0	110,438		0	212
		19,755		15,228	4,527		19,755			213
		13,967	594	11,027	1,983		13,604		363	214
		11,878					11,381		427	215
$136,364		1,009,263	175,846	701,053	132,364		1,009,263			216
		7,180		6,950	200		7,150		30	217
		11,448	573	9,974	901		11,448			218
			22,500	18,650	6,700		47,850			219
		15,083		10,300	2,920		15,189			220
0	0	15,916	7,000	14,000	2,700	0	23,700	4,000		221
0	0	27,740	3,540	15,850	8,350	0	27,740	0	0	222
0	0	2,266,339	349,603	*e*1,390,869	*e*525,867	(*e*)	2,266,339	0	0	223
0	0	65,698		52,589		1,693	*f*65,698			224
			14,867		5,999		87,256			225
		398,977	152,327	193,877	52,773		398,977			226
		97,867	14,000	60,083	22,784	1,000	97,867	0	6	227
0	0	25,187	0	17,563	5,813	1,805	25,181			228
0	0	27,000		17,807	8,679	512	26,998		1,402	229
		18,897		13,500	3,923	72	17,495			230
				26,583	15,072		41,655		38	231
	758	31,431	5,567	16,791	8,715	323	31,396			232
	2,071	189,400	18,611	122,353	40,787	5,785	187,536		1,873	233
		75,627	10,513	45,158	17,813	2,143	75,627			234
			6,000				36,375			235
0	0	15,054	0	11,250	3,400	0		0		236
			30,920	47,831	17,695		96,446		*g*0	237
				51,074	12,913	1,346	65,333			238
		72,417	954	57,863	10,301	3,299	72,417		466	239
	610	33,081	59	24,256	7,786	514	32,615		*h*0	240
	*h*0	87,287	5,000	65,938	19,117	2,129	92,184		32,988	241
79,500	15,572	315,189	62,639	143,133	60,762	15,667	282,201			242
		149,701	7,468	101,291	38,687	2,255	149,701	18,350		243
		99,217	13,725	49,744	15,002	2,393	80,867			244
		18,059		13,857	4,202		18,059			245
		39,838	7,563	24,523	7,750		39,836		988	246
		44,031	36,030	12,813		200	43,043			247
							26,245			248
		24,289	1,332	17,587	5,363		24,282			249
							26,934			250
			37,338	84,414	20,334	8,534	150,620			251
		24,791		19,673	4,869	249	24,791			252
		121,700		94,025	23,791	574	118,391		32	253
		37,495	2,509	23,749	10,265	940	37,463			254
				39,422	10,048	1,214	40,684		0	255
		30,200	8,500	22,120	2,375	0				256

d Value of real estate only.
e The amount expended for evening schools, $62,641, is included in columns 14 and 15.
f Fuel is not included.
g Deficit, $197.
h Balances are turned into the city treasury.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889–90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	MASSACHUSETTS—continued.								
257	Pittsfield	$9,920,149	$9,920,149	$200,000	$130	$86,349	.....	$461	$86,939
258	Plymouth	5,755,400	5,755,400	79,500	.....	.....	.....	.....	.....
259	Quincy*	9,757,960	.....	.....	0	50,950	0	90	51,040
260	Salem	26,055,551	26,055,551	380,500	.....	97,201	$2,529	1,143	100,873
261	Somerville	30,004,600	30,004,600	452,825	.....	183,897	.....	.....	183,897
262	Southbridge	3,217,294	4,289,724	57,100	.....	17,250	.....	151	17,401
263	Spencer	4,065,516	.....	.....	.....	16,458	.....	.....	.....
264	Springfield	44,493,633	44,493,633	650,645	.....	183,709	.....	648	184,357
265	Stoneham	3,406,871	3,406,871	76,500	.....	16,200	.....	36	16,236
266	Taunton	17,823,032	17,823,032	320,000	.....	73,500	.....	553	74,053
267	Waltham	13,058,330	13,058,330	265,664	.....	.....	.....	.....	.....
268	Watertown	8,000,000	8,000,000	200,000	.....	22,205	.....	.....	.....
269	Westfield	6,576,514	9,395,020	.....	69	29,416	.....	.....	29,485
270	Weymouth	6,441,845	6,441,845	157,000	58	37,800	.....	1,203	39,061
271	Woburn	8,918,306	8,918,306	200,000	89	32,148	.....	197	32,434
272	Worcester	69,403,251	69,403,251	1,200,111	.....	251,948	.....	722	252,670
	MICHIGAN.								
273	Adrian	3,979,600	3,979,600	130,000	7,081	13,478	.....	962	21,521
274	Alpena	3,853,775	5,780,663	55,000	4,136	28,024	.....	.....	32,160
275	Ann Arbor	6,154,130	6,154,130	193,000	3,895	30,915	.....	7,679	42,489
276	Au Sable	1,900,000	1,900,000	8,000	1,300	10,000	.....	.....	.....
277	Battle Creek	4,250,000	4,250,000	200,000	4,487	39,698	.....	368	44,553
278	Bay City	10,117,205	10,117,205	204,000	11,779	59,085	315	307	.....
279	Big Rapids	2,017,410	2,017,410	50,000	2,216	10,452	75	170	12,913
280	Cadillac	.....	.....	30,000	.....	.....	.....	.....	.....
281	Cheboygan	1,781,661	1,781,661	12,000	2,143	11,471	139	415	14,168
282	Coldwater	3,767,000	5,022,666	75,000	1,857	16,234	0	5,914	24,005
283	Detroit	156,505,790	156,505,790	1,591,100	83,483	449,796	0	14,357	547,636
284	East Saginaw	.....	.....	235,949	12,557	82,512	157	2,137	97,363
285	Escanaba	1,110,877	3,332,620	50,000	4,376	6,610	.....	360	11,346
286	Flint	4,659,560	4,659,560	125,000	3,142	28,985	.....	1,397	33,524
287	Grand Haven	1,649,635	1,649,635	50,000	2,440	12,654	.....	53	15,147
288	Grand Rapids	21,625,202	64,875,606	710,000	19,932	165,140	13,502	8,450	207,524
289	Ionia	.....	.....	60,000	1,742	14,582	.....	1,182	17,506
290	Iron Mountain*	.....	.....	25,000	.....	.....	.....	.....	.....
291	Ironwood	.....	.....	45,000	.....	.....	.....	.....	.....
292	Ishpeming	5,423,320	10,846,640	110,000	.....	.....	.....	.....	.....
293	Jackson, district No. 1.	.....	.....	125,000	.....	.....	.....	.....	.....
294	Jackson, district No. 17.	.....	.....	55,000	.....	.....	.....	.....	.....
295	Kalamazoo	7,101,650	9,468,867	210,000	6,761	40,348	1,976	1,593	50,678
296	Lansing	.....	.....	120,000	.....	.....	.....	.....	.....
297	Ludington	1,410,000	3,525,000	15,000	3,040	27,135	.....	740	30,916
298	Manistee*	.....	.....	88,000	.....	.....	.....	.....	.....
299	Marquette	.....	.....	94,000	1,754	49,000	.....	.....	50,754
300	Menominee	2,540,074	4,233,457	50,000	1,763	19,947	.....	14	21,724
301	Monroe*	.....	.....	32,000	.....	.....	.....	.....	.....
302	Mount Clemens	1,600,000	3,200,000	35,000	.....	.....	.....	.....	.....
303	Muskegon	6,102,080	18,327,240	425,000	16,000	61,761	386	75,423	153,570
304	Negaunee	7,200,000	10,800,000	48,000	5,164	14,000	.....	144	19,308
305	Niles	1,646,750	2,195,667	45,000	1,565	11,145	66	279	13,055
306	Owosso	1,250,000	3,750,000	118,000	.....	.....	.....	.....	.....
307	Pontiac	2,550,550	2,550,550	100,000	4,198	13,011	.....	689	17,898
308	Port Huron	4,094,300	4,094,300	110,000	5,400	22,232	.....	627	28,259
309	West Saginaw	.....	.....	205,701	7,745	42,393	.....	1,142	51,280
310	Sault Ste. Marie	.....	.....	37,000	1,884	11,653	0	767	14,304
311	Traverse City	.....	.....	40,000	.....	.....	.....	.....	.....
312	West Bay City	2,200,000	4,400,000	90,000	6,799	28,070	163	168	35,800
313	Ypsilanti	.....	.....	55,000	.....	.....	.....	.....	.....

* Statistics of 1888–89.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888-89).	Total sum available for use during the year.	Expenditures for the school year 1889-90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890-91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
	$111	$87,050	$40,000	$33,718	$12,286	$700	$86,704		$346	257
	0	27,407	2,245	19,786	4,587	0	26,618	0	789	258
0	0	51,040		32,882	16,204	2,074	51,160	0	*a* 0	259
		100,873	9,978	68,548	20,297	2,050	100,873			260
		183,897	34,322	94,172	23,656	1,844	154,054		29,838	261
	572	17,973	1,548	10,847	4,289	521	17,207	0	766	262
			3,586				23,209			263
		184,357	43,077	101,394	36,783	3,329	183,583	0	*b* 774	264
			882	11,493	4,136		16,511			265
		74,053		55,470	17,089	1,326	73,885			266
			12,000	39,623	16,966	1,425	70,014	$14,000		267
				*19,100			25,802			268
0	5,343	34,828					29,419		5,409	269
$13,000	7,978	60,039	14,823	25,463	14,316		54,602		5,437	270
	6,882	39,316		32,192	5,629	579	38,400		916	271
		252,670	111,109	184,612	56,453	6,181	358,415			272
		*					*			
	2,970	24,491	2,000	14,754	5,880		22,634		1,857	273
	753	32,913	1,500	13,955	10,415		25,870		7,043	274
	851	43,340	7,749	26,816	7,802	125	42,492	4,000		275
	2,490			5,080	1,291		8,099		*c* 0	276
	137	44,690	8,567	19,284	10,085		37,936	8,000		277
			15,557	39,373	12,690				5,124	278
	6,528	19,441		11,395	2,922		14,317			279
				11,980	3,055		15,015		2,460	280
7,200	2,279	23,647	5,492	8,161	2,934		16,587	4,600	14,225	281
0	8,996	33,001	0	10,786	5,990		16,776	2,000	42,487	282
0	28,001	575,637	159,493	303,570	57,852	12,235	533,150		4,501	283
5,000	7,363	109,726	33,270	54,570	17,385		105,225		798	284
		11,346		6,500	4,048		10,548	5,500	385	285
	240	33,764		17,015	10,863		27,878		110	286
	383	15,530	1,050	10,694	3,676		15,420	19,000	69,919	287
17,906	66,328	291,758	31,501	121,838	48,945	555	202,839		2,258	288
	2,411	19,917	1,850	12,537	3,272		17,659			289
				7,933	7,499		29,038			290
				7,750	6,000		16,457			291
		51,056		12,275		0	47,365		3,691	292
				24,459	6,790		33,018			293
										294
				9,259	3,850		13,109			
	13,280	63,958	2,681	29,375	13,342		45,398	3,000	15,560	295
		50,066		21,002			36,518			296
		30,916		75,550	6,433		30,885		31	297
				20,592	5,078		36,075			298
	859		36,500	13,270			84,572	3,000		299
	6,361	28,085	500	14,115	4,326		18,941		6,144	300
				5,300	2,072		10,003			301
				5,576	1,622		7,444	4,000	100	302
	2,607	156,177	88,616	48,618	14,843		152,077	3,765	7,480	303
	9,164	28,472	1,990	9,731	5,509		17,227		1,618	304
	911	13,966	286	9,331	2,731		12,348			305
				11,924	9,981		21,905	0	1,470	306
	298	18,196	1,533	11,417	3,776	0	16,725		9,031	307
	13,826	42,085	6,000	17,245	9,809		33,054		18,275	308
20,000	27,572	98,842	41,907	28,734	9,926		80,567	0	1,728	309
0	474	14,778	0	5,935	7,115	0	13,050			310
				9,397	4,832		23,370		2,139	311
	2,970	38,770	5,674	21,115	9,542		36,331			312
				11,204			29,013			313

a Deficit, $120.

b Lapsed into the city treasury.

c Overdraft, $1,246.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	MINNESOTA.								
314	Anoka	$1,427,011	$2,140,517	$[illegible],000	$4,919	$11,127	.....	367	$16,413
315	Brainerd	1,654,802	2,206,403	*52,700	.....	.....	.....	.....	.....
316	Duluth	23,766,653	71,299,959	529,600	9,756	172,949	$1,459	2,175	186,339
317	Faribault	1,733,033	2,888,385	73,000	11,363	.....	.....	352	20,715
318	Mankato	2,700,000	5,400,000	65,000	(25,000)		5,000	.....	30,000
319	Minneapolis	.....	.....	2,000,000	50,392	(426,034)		258	485,684
320	Red Wing	1,842,982	3,685,964	60,000	4,833	15,630	.....	7	20,480
321	Rochester	1,798,757	2,966,459	84,800	1,738	15,595	.....	4,148	21,481
322	St. Cloud	2,441,994	7,325,892	75,000	2,138	14,204	.....	297	16,639
323	St. Paul	120,000,000	240,000,000	2,363,125	b540,391	(b)	(b)	2,361	542,752
324	Stillwater	5,000,000	7,500,000	107,000	4,762	35,810	5,791	.....	46,363
325	Winona	.....	.....	300,000	.....	.....	.....	.....	74,425
	MISSISSIPPI.								
326	Columbus	1,925,182	.....	30,000	2,739	2,398	5,813	44	10,994
327	Greenville*	2,021,435	.....	.....	1,091	8,377	.....	575	10,043
328	Jackson	2,400,000	3,000,000	40,000	2,500	6,000	1,500	500	10,500
329	Meridian	4,500,000	4,500,000	60,000	.....	.....	.....	.....	.....
330	Natchez	2,500,000	3,750,000	40,000	2,500	9,075	.....	.....	11,575
331	Vicksburg	4,500,000	4,500,000	33,000	3,000	15,715	2,039	113	20,867
	MISSOURI.								
332	Boonville	1,000,000	.....	35,000	1,944	7,185	.....	216	9,345
333	Brookfield	525,000	787,500	30,000	1,343	0	5,983	0	7,326
334	Cape Girardeau*	725,655	.....	25,000	2,657	5,747	.....	16	8,420
335	Carthage	1,863,512	3,727,024	100,000	c5,076	16,417	(c)	1,644	23,936
336	Chillicothe	1,250,000	3,750,000	55,000	d4,193	11,873	(d)	351	16,417
337	Clinton	1,124,140	3,372,420	50,000	c2,489	13,177	(c)	023	16,389
338	Columbia	1,221,855	.....	20,000	c1,940	4,407	(c)	.....	.....
339	Fulton	1,038,000	.....	10,000	1,708	5,884	.....	88	7,680
340	Hannibal	3,000,000	4,500,000	77,250	6,760	(25,431)		239	32,430
341	Independence	2,618,110	6,545,250	60,000	2,420	14,718	0	329	17,467
342	Jefferson City*	1,312,789	.....	40,000	2,224	11,514	518	25,402	39,658
343	Joplin*	778,585	778,585	30,000	3,679	7,156	265	126	11,226
344	Kansas City	55,000,000	.....	1,461,625	41,632	287,496	15,319	2,759	347,206
345	Lexington	1,259,590	.....	12,000	3,809	4,369	0	108	8,286
346	Louisiana	1,105,755	1,658,633	20,000	1,842	.....	3,025	814	5,681
347	Marshall	1,436,793	4,105,123	48,000	2,735	11,271	686	903	15,575
348	Maryville	.....	.....	.....	1,132	.....	10,019	1,644	12,795
349	Mexico	1,366,095	2,732,190	34,000	2,000	8,565	1,001	561	12,127
350	Moberly	897,701	2,693,103	60,000	4,171	.....	10,979	.....	15,150
351	Nevada	1,500,000	4,500,000	50,000	8,533	8,395	32	302	17,262
352	Rich Hill	750,000	.....	35,000	10,734	7,075	4,684	20	22,513
353	St. Charles*	1,913,115	2,869,673	53,000	d2,760	1,889	(d)	1,109	5,758
354	St. Joseph	24,000,000	48,000,000	334,585	25,651	.....	92,399	189	118,239
355	St. Louis	227,731,200	227,731,200	3,607,771	105,727	897,265	25,793	215,633	1,244,418
356	Springfield	5,630,125	14,075,313	125,000	9,748	39,799	.....	563	50,110
357	Trenton	1,000,000	1,500,000	48,000	2,686	8,708	.....	17,110	28,504
358	Warrensburg	1,140,000	.....	20,000	2,898	6,176	.....	1	9,075
	MONTANA.								
359	Butte City	11,000,000	11,000,000	200,000	.....	.....	42,289	10,114	52,403
360	Helena	13,000,000	26,000,000	200,000	.....	.....	43,381	1,210	44,591
	NEBRASKA.								
361	Beatrice	1,248,062	6,240,310	105,500	31,559	5,459	.....	.....	37,018
362	Fremont	750,000	6,000,000	77,500	2,929	10,871	g8,250	85	22,035
363	Grand Island	1,200,000	4,800,000	165,000	4,554	25,300	.....	11,851	41,705

* Statistics of 1888-89.
a Expenses of evening schools are included in columns 14 and 15.
b Receipts from city and county taxes are included in column 5.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888–89).	Total sum available for use during the year.	Expenditures for the school year 1889–90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890–91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
$3,980	$464	$20,556	$152	$9,258	$3,571	.....	$12,981	$7,500	$75	314
.....	.....	.....	.....	11,348	4,145	.....	.....	.....	.....	315
.....	114,797	301,136	101,744	41,640	33,187	$533	180,104	.....	121,032	316
.....	572	21,387	556	10,274	5,877	.....	16,707	4,000	679	317
.....	.....	30,000	.....	15,000	10,000	.....	25,000	800	.....	318
411,977	4,588	902,249	143,000	*a*350,898	*a*112,351	(*a*)	606,249	296,000	.....	319
.....	5,477	25,957	327	14,197	3,686	0	18,210	0	7,747	320
.....	6,914	28,395	2,061	11,639	4,433	.....	18,133	7,000	3,262	321
11,355	4,359	32,354	9,976	12,700	3,944	.....	26,620	1,374	4,360	322
344,762	26,872	914,386	311,103	324,689	151,962	.....	787,754	120,414	6,218	323
.....	3,365	49,728	1,274	24,386	9,087	160	34,907	7,313	7,508	324
.....	17,878	92,371	.....	37,732	10,195	154	48,081	5,000	39,290	325
0	684	11,678	375	9,000	889	.....	10,264	.....	1,414	326
0	0	10,043	3,000	6,127	916	0	10,043	0	0	327
0	1,200	11,700	.....	9,500	800	0	10,300	0	1,400	328
.....	0	13,500	.....	12,000	.....	0	13,500	.....	0	329
.....	.....	.....	.....	11,000	575	.....	11,575	.....	.....	330
.....	1,333	22,200	1,225	12,975	2,766	.....	16,966	4,000	1,234	331
4,548	0	13,893	.....	5,166	1,725	.....	6,891	7,000	2	332
0	358	7,684	0	4,210	2,149	0	6,359	0	1,325	333
0	1,017	9,437	848	3,657	2,236	0	*e*6,741	1,502	1,194	334
0	20,506	44,442	24,145	14,737	5,560	0	44,442	0	0	335
10,677	993	28,087	11,469	7,640	3,461	.....	22,570	2,000	3,517	336
.....	4,898	21,187	.....	8,257	2,838	.....	11,095	3,019	7,073	337
0	1,403	8,197	0	6,120	1,109	.....	7,229	0	968	338
0	1,619	9,299	.....	5,190	1,688	.....	6,878	500	1,921	339
.....	637	33,067	.....	89,332	7,812	.....	27,144	3,000	2,923	340
0	9,528	26,925	1,295	10,770	3,327	0	15,392	0	11,603	341
0	710	40,578	0	6,960	3,855	0	10,815	29,000	763	342
0	544	11,770	49	6,780	2,329	0	9,158	3,000	719	343
154,330	228,356	729,882	196,923	192,219	133,842	.....	522,984	.....	206,898	344
25,696	2,581	36,563	209	6,507	2,034	.....	8,750	.....	27,813	345
0	0	5,681	.....	4,108	1,596	0	5,704	0	0	346
.....	4,127	19,702	260	9,755	4,340	.....	14,355	2,500	2,846	347
.....	6,001	18,796	.....	9,000	658	.....	9,658	4,580	4,550	348
5,116	1,910	19,153	5,872	9,577	1,369	.....	16,818	.....	2,335	349
0	4,445	19,595	.....	9,458	4,647	0	14,105	0	5,490	350
.....	4,138	21,400	850	11,699	5,048	.....	17,597	.....	3,803	351
0	12,641	35,154	6,675	7,198	3,112	.....	16,985	0	18,169	352
1,312	949	8,019	102	5,296	1,607	0	7,005	0	1,014	353
.....	.....	118,239	3,422	77,496	42,635	.....	123,553	.....	.....	354
.....	110,055	1,354,473	106,341	713,027	261,325	10,854	1,091,547	.....	262,926	355
.....	7,048	57,158	753	23,472	8,899	.....	33,124	6,000	18,034	356
.....	4,893	33,397	986	6,780	5,448	.....	13,214	1,200	.....	357
0	1,190	10,265	.....	6,165	1,323	.....	7,488	2,030	747	358
50,672	16,628	119,103	1,153	28,812	11,177	.....	41,142	.....	77,961	359
.....	11,669	56,260	.....	28,441	.....	.....	36,249	5,000	15,011	360
.....	6,652	43,670	1,264	17,475	13,475	.....	32,214	.....	11,456	361
35,200	4	57,239	33,246	13,774	7,595	.....	54,615	0	2,624	362
26,324	6,935	74,964	32,390	20,410	5,421	300	58,521	3,248	13,195	363

c County and township taxes are included in column 5.
d Receipts from county taxes are included in column 5.
e From fines and licenses.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	NEBRASKA—continued.								
364	Hastings			$100,000	$2,966	$8,000	.....	$13,439	$24,405
365	Kearney	$1,400,000	$5,200,000	168,000	18,139	.....	.....	4,000	22,139
366	Lincoln	5,500,000	22,000,000	413,000	14,508	41,245	$754	45,565	102,072
367	Nebraska City	.....	.....	*82,000	3,595	14,908	.....	109	18,612
368	Omaha	19,990,715	139,935,008	1,559,500	30,938	76,514	.....	263,901	371,353
369	Plattsmouth*	1,643,050	.....	58,000	2,562	8,894	172	233	11,861
370	South Omaha	.....	.....	.....	2,457	9,786	*49,116	.....	61,359
	NEVADA.								
371	Virginia City*	1,500,000	3,000,000	30,000	9,500	.....	20,500	.....	30,000
	NEW HAMPSHIRE.								
372	Concord	10,316,222	10,316,222	.....	2,341	.....	.....	.....	.....
373	Dover	.....	.....	155,000	1,501	29,514	0	385	31,400
374	Keene	6,096,732	6,096,732	88,200	11,328	5,675	.....	935	17,938
375	Manchester	22,962,790	32,803,986	300,000	3,572	55,007	.....	14	58,593
376	Nashua	10,082,586	15,123,879	232,395	.....	37,750	702	2,349	40,801
377	Portsmouth	7,398,710	7,398,710	175,000	1,367	24,500	395	304	26,566
378	Rochester	1,366,171	1,366,171	47,400	495	15,378	507	161	16,541
	NEW JERSEY.								
379	Atlantic City	5,000,000	15,000,000	100,000	11,504	22,333	.....	7,200	41,037
380	Bayonne	8,500,000	14,166,667	157,300	17,417	26,500	.....	.....	43,917
381	Bordentown	.....	.....	15,500	7,897	1,900	.....	426	.....
382	Bridgeton*	.....	.....	40,000	10,268	9,984	.....	395	20,647
383	Burlington	.....	.....	38,000	9,422	.....	508	.....	.....
384	Camden	.....	.....	407,000	9,072	95,500	.....	.....	105,896
385	Elizabeth	14,062,000	14,062,000	218,000	50,362	20,000	0	7,518	77,880
386	Gloucester City	.....	.....	30,000	.....	.....	.....	.....	.....
387	Hackensack	1,562,986	4,688,940	65,000	6,596	8,300	.....	.....	14,896
388	Harrison	2,000,000	4,000,000	15,000	.....	.....	.....	.....	.....
389	Hoboken	18,898,462	18,898,462	245,000	58,735	40,929	.....	110	99,774
390	Jersey City	80,000,000	133,333,333	715,930	250,000	33,450	0	0	288,450
391	Lambertville*	.....	.....	33,000	6,620	1,300	.....	360	8,280
392	Long Branch*	9,000,000	9,000,000	134,500	17,276	3,500	802	916	22,494
393	Millville	2,900,000	.....	48,000	2,477	11,927	7,971	9	22,384
394	Morristown	6,000,000	.....	70,000	9,195	10,750	.....	465	20,410
395	New Brunswick	6,504,125	13,008,250	150,000	21,274	13,543	0	4,245	39,062
396	Newark	110,806,845	138,508,556	1,328,375	314,262	107,415	0	3,929	425,606
397	Orange	6,024,310	12,048,620	165,000	32,418	5,500	.....	7,602	45,520
398	Passaic	3,404,025	3,404,025	103,000	.....	39,779	.....	.....	39,779
399	Paterson	28,824,270	48,040,450	395,000	92,000	65,337	.....	.....	157,337
400	Perth Amboy*	.....	.....	35,000	7,449	2,575	.....	.....	10,024
401	Phillipsburg	2,750,000	2,750,000	41,000	15,206	6,120	0	120	21,446
402	Plainfield	5,750,000	10,454,545	167,000	657	31,248	13,076	1,959	46,940
403	Rahway*	.....	.....	55,000	9,498	6,500	.....	.....	15,998
404	Red Bank*	.....	.....	32,000	6,129	1,800	.....	147	8,076
405	Salem	3,500,000	5,250,000	31,500	8,776	5,872	529	598	15,775
406	South Amboy*	.....	.....	27,000	5,362	1,560	.....	.....	6,922
407	Trenton	26,324,702	39,487,053	337,388	85,784	36,125	.....	14	121,923
408	Union*	.....	.....	60,000	11,275	5,717	.....	.....	16,992
	NEW MEXICO.								
409	Santa Fe	.....	.....	12,000	0	0	2,200	0	2,200
	NEW YORK.								
410	Albany	68,747,055	68,747,055	88,500	51,959	177,390	.....	6,425	235,774
411	Albion	2,074,094	3,111,141	33,000	4,764	8,000	.....	1,118	13,882
412	Amsterdam	.....	.....	*92,300	.....	.....	.....	.....	.....
413	Auburn	11,170,793	16,756,190	285,000	15,150	66,782	.....	1,212	53,144

*Statistics of 1888-89.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888–89).	Total sum available for use during the year.	Expenditures for the school year 1889–90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890–91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
0	$9,190	$33,595	.....	$13,327	$5,673	.....	$19,000	.....	$14,595	364
.....	4,500	26,639	$473	14,655	5,511	.....	20,639	.....	6,000	365
0	33,438	135,510	36,875	49,454	12,795	.....	99,124	.....	36,386	366
$21,529	9,226	49,367	21,470	13,930	4,770	.....	40,170	.....	9,197	367
.....	1,626	372,979	32,417	206,146	98,052	.....	338,615	$5,800	28,564	368
0	7,305	19,167	2,347	9,355	4,479	0	16,181	0	2,986	369
0	13,144	74,503	31,717	9,247	8,816	.....	49,780	.....	24,723	370
0	0	30,000	1,750	17,700	10,550	0	30,000	0	0	371
.....	.....	.....	*1,967	*21,482	*9,741	*$623	*34,173	.....	.....	372
0	333	31,733	2,631	20,362	7,153	831	30,977	.....	756	373
3,387	0	21,325	3,047	9,615	4,628	201	17,491	3,834	.....	364
0	0	58,593	4,829	44,213	8,726	1,799	59,567	.....	.....	375
.....	29	.....	.....	*25,350	*11,402	*2,301	*39,053	.....	.....	376
57,000	0	83,566	49,989	19,640	3,850	250	73,729	.....	.....	377
0	250	16,798	.....	11,059	3,462	2,273	16,794	.....	4	378
.....	634	41,671	0	18,572	12,593	.....	31,165	5,383	5,163	379
.....	2,730	46,287	419	31,960	12,885	.....	45,264	.....	1,023	380
.....	.....	11,868	0	8,212	2,162	.....	10,374	.....	.....	381
0	0	20,647	785	13,430	3,087	.....	17,302	.....	.....	382
.....	.....	9,931	0	9,389	1,856	.....	11,245	.....	.....	383
.....	43,634	165,787	27,726	83,118	32,519	500	143,863	17,000	4,924	384
20,000	16,345	114,225	34,009	48,610	19,866	424	102,909	0	11,316	385
.....	.....	.....	.....	6,085	.....	.....	9,031	.....	.....	386
.....	2,362	17,258	.....	12,127	4,220	.....	16,347	.....	911	387
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	388
0	1,124	100,898	1,555	80,381	17,649	1,143	100,728	0	170	389
.....	.....	288,450	.....	230,049	45,804	0	275,853	0	.....	390
0	0	8,280	.....	6,575	1,614	.....	8,189	.....	.....	391
0	570	23,064	11,250	21,800	11,600	0	.....	2,000	.....	392
0	967	23,351	1,074	16,805	3,125	750	21,754	0	1,597	393
0	0	20,410	2,670	12,760	3,945	.....	19,375	.....	.....	394
0	1,399	40,161	248	26,495	9,526	359	36,628	3,000	533	395
0	69,034	494,640	60,706	368,263	95,617	11,446	476,032	0	18,608	396
12,333	2,589	60,442	25,633	24,957	9,687	.....	60,277	0	165	397
.....	0	39,779	12,407	18,903	6,344	1,145	38,499	1,280	0	398
.....	4,110	161,447	.....	101,402	52,773	3,359	157,534	.....	3,913	399
0	0	10,024	2,266	5,275	1,999	.....	9,540	.....	.....	400
.....	1,237	22,683	492	13,898	4,664	0	19,054	0	.....	401
.....	6,200	53,140	2,776	25,394	12,253	478	40,901	4,000	8,239	402
0	0	15,998	94	11,714	3,672	0	15,480	.....	.....	403
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	404
.....	9,758	25,533	175	9,985	2,815	230	13,205	.....	12,328	405
.....	.....	.....	.....	.....	.....	.....	.....	.....	516	406
4,500	56,586	183,004	21,235	72,530	30,427	3,403	127,595	.....	55,409	407
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	408
0	0	2,200	.....	2,200	.....	0	2,200	0	.....	409
.....	118,505	354,279	44,799	169,905	49,460	.....	264,164	.....	90,115	410
.....	.....	13,882	1,353	8,081	3,237	.....	12,671	.....	1,211	411
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	412
.....	8,781	91,925	25,022	48,356	12,404	.....	85,782	4,000	2,143	413

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment of taxes.	From city apportionment of taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	NEW YORK—continued.								
414	Batavia	$3,400,000	$5,100,000	$141,005	$5,911		$9,109	$687	$15,707
415	Binghamton	17,581,498	21,976,872	293,205	14,423	$59,420	0	1,564	75,407
416	Brooklyn	428,483,681	612,119,540	6,178,536	336,704	2,522,903	0	24,670	
417	Buffalo			1,702,925	100,586	578,452		4,278	683,316
418	Canandaigua	4,314,000	4,314,000	61,000	4,454	8,739		1,973	15,166
419	Catskill	2,516,429	3,355,239	37,616	2,500	5,200	0	150	7,850
420	Cohoes	11,000,000	11,000,000	134,200	11,119	33,318		507	44,944
421	Cortland	1,816,781		17,500	3,851	4,875	93	5	8,824
422	Dunkirk	1,900,000	5,700,000	115,000	6,236	19,858	0	465	26,559
423	Edgewater	505,880	2,023,420	19,701	1,265		6,401	1,669	9,335
424	Elmira	13,374,094	20,062,041	382,600	16,635	45,582		381	62,598
425	Flushing	2,235,517	5,588,879	80,000	4,164	16,655		3,060	23,879
426	Fulton	500,000	500,000	76,000	3,600	4,100		4,000	11,700
427	Geneva	4,333,760	5,416,700	42,124	4,103	11,396		1,114	17,443
428	Gloversville								
429	Green Island	1,836,540	3,673,980	38,000	3,052	7,852		12	10,916
430	Haverstraw*	1,235,956	1,235,956		2,282	8,343		82	10,707
431	Hoosick Falls	2,656,871	2,656,871	47,000	4,973	21,368			26,341
432	Hornellsville	4,799,390	4,799,390	74,644	7,527	21,030		1,179	29,736
433	Hudson			48,500	5,568	7,000		496	13,064
434	Ilion			37,200	3,085	7,579		410	11,074
435	Ithaca	2,938,523	5,896,325	143,000	10,072	20,252	0	2,624	32,948
436	Jamestown	3,651,962	3,651,962	160,000	8,400	29,547	0	3,698	41,645
437	Johnstown	2,502,271	6,255,678	71,000	4,844	16,130		21,598	42,572
438	Kingston, dist. No. 5.	6,284,000	6,284,000	188,000	7,542	22,656		2,102	32,300
439	Lansingburg	5,850,000	5,850,000	77,000	7,015	24,291		85	31,391
440	Little Falls			17,654	4,933	13,506		6,171	24,610
441	Lockport	6,378,740	6,378,740	*137,500	9,031	23,009	150	15,027	37,208
442	Long Island City	9,341,067	37,364,268	121,830	12,501	45,520		5,084	63,105
443	Lyons			64,856	3,600	6,741		371	10,712
444	Malone	2,037,646		75,000	6,432	14,049		1,064	21,545
445	Matteawan*	914,728		19,500	2,433	4,043	0	0	6,475
446	Medina	2,122,390	2,122,390	38,000	3,497	6,092		1,800	11,389
447	Middletown	2,651,165	4,418,610	90,000	6,435	16,480		2,196	25,111
448	Mount Vernon	2,208,440	4,416,880	141,000	5,720	37,711		396	43,827
449	New Brighton*	3,429,161	13,716,644	83,200	7,381	36,333		5,232	48,946
450	New Rochelle			108,000	3,654	30,791		623	35,068
451	New York	1,696,978,390	2,424,254,744	16,439,171	680,135	3,277,072			3,957,207
452	Newburg	9,228,270	18,456,540	260,000	12,166	43,601		2,174	57,941
453	Niagara Falls	3,695,532	6,159,220	54,354	2,603	13,329		1,343	17,275
454	Norwich			60,000					
455	Ogdensburg	3,984,605	5,976,908	84,714	6,205	15,939		3,005	25,149
456	Olean	2,549,672	4,249,437	93,000	7,253	22,367		717	30,337
457	Oswego	9,397,243	9,397,243	175,000	13,071	30,000		1,038	44,109
458	Owego	3,019,840	3,019,840	40,000	6,614	(14,000)		1,103	21,717
	Peekskill:								
459	Drum Hill dist.	1,030,000		15,000	2,080	6,089			8,269
460	Oakside district	1,000,000	1,666,667		2,353	7,949		239	10,541
461	Penn Yan*	1,779,613	3,559,226	20,613	2,926		5,490	2,099	10,515
462	Plattsburg	1,392,587	2,088,879	70,000	7,093	12,707		1,435	21,235
463	Port Chester*	1,241,460		41,250	2,116	11,976		425	14,537
464	Port Jervis	1,410,000	3,525,000	80,000	8,556	23,905		997	33,458
465	Poughkeepsie	13,200,105	18,857,293	172,505	12,976	34,090	15,020	1,564	63,650
466	Rochester	88,197,775	88,197,775	900,000	65,446	295,492		1,812	362,750
467	Rome	4,255,717	5,674,289	75,000	6,985	16,026	0	1,682	24,693
468	Saratoga Springs	4,154,040	16,616,160	120,000	9,996	44,783	0	721	55,500
469	Schenectady	8,000,000		d113,000	8,856	22,000	0	29,794	60,650
470	Sing Sing	1,848,700	5,546,100	80,000	4,764	18,261		4,092	27,116
471	Syracuse			759,000	41,283	159,210		4,910	205,403
472	Troy	48,181,422	48,181,422	450,000	29,866	122,692	0	3,487	156,045
473	Utica	18,981,658	18,981,658	447,792	23,404	77,000	(e)	2,745	103,150

*Statistics of 1888-89.
a Overdraft, $616.
b Amount received from sale of bonds is included in column 6.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888–89.	Total sum available for use during the year.	Expenditures for the school year 1889–90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890–91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
.....	$7,576	$23,283	$500	$10,000	$6,300	.....	$16,800	$2,000	$4,483	414
0	5,487	80,894	22,277	46,897	12,336	0	81,510	0	*a*0	415
(*b*)	947,674	3,831,951	610,924	1,358,466	391,513	$44,843	2,405,746	.....	1,426,205	416
.....	280,523	963,839	198,741	470,617	79,600	10,679	749,637	.....	214,202	417
$25,000	1,902	42,068	2,605	10,749	3,664	.....	17,018	.....	25,050	418
0	0	7,950	.....	*7,229	.....	0	7,950	0	0	419
.....	8,847	53,791	7,741	21,960	8,115	.....	37,816	.....	15,975	420
.....	2,724	11,548	.....	6,637	2,545	.....	9,182	.....	2,366	421
0	6,134	32,693	328	18,415	8,862	0	27,605	0	5,088	422
.....	1,388	10,723	1,527	4,950	2,029	.....	8,506	1,000	1,217	423
20,014	1,672	84,344	20,779	46,965	6,693	.....	74,437	9,907	.....	424
.....	0	23,879	2,077	12,905	6,897	.....	21,879	2,000	0	425
.....	1,163	12,863	400	7,600	1,100	.....	9,100	2,600	.....	426
.....	7,649	25,062	1,305	9,948	1,420	.....	12,673	.....	12,389	427
.....	.....	.....	.....	*14,525	.....	.....	.....	.....	.....	428
0	2,765	13,681	.....	7,613	3,058	0	10,671	0	3,010	429
0	1,525	12,232	.....	.....	.....	.....	.....	.....	2,116	430
.....	3,076	30,017	0	12,800	11,900	.....	24,700	4,076	1,251	431
.....	8,409	38,145	.....	18,345	6,014	.....	24,359	7,308	6,478	432
.....	6,535	19,599	182	10,599	1,655	.....	12,436	.....	7,163	433
.....	.....	.....	.....	9,905	1,764	.....	11,669	.....	.....	434
0	2,476	35,424	1,542	19,570	6,177	0	27,289	5,000	3,135	435
0	5,066	46,711	11,699	29,382	5,630	0	46,711	0	0	436
.....	3,313	45,885	32,936	11,450	4,052	.....	48,438	.....	*c*0	437
0	0	32,300	4,066	21,082	6,552	.....	32,300	.....	.....	438
.....	9,779	41,170	10,715	18,715	5,792	.....	34,692	3,000	3,478	439
22,000	180	46,790	24,506	5,999	8,202	.....	38,707	7,597	.....	440
0	.....	87,933	23,200	24,919	7,804	0	55,923	0	32,010	441
138,149	44,928	246,182	158,167	46,056	14,121	2,179	220,523	.....	25,659	442
.....	2,461	13,173	.....	5,617	5,331	.....	10,948	.....	2,225	443
.....	2,726	24,271	.....	11,979	6,775	.....	18,754	2,625	2,892	444
0	614	7,089	304	4,750	738	0	5,792	0	1,297	445
.....	2,503	13,892	978	8,531	1,697	.....	11,206	.....	2,685	446
.....	21,464	46,575	2,956	17,020	3,210	.....	23,186	.....	23,389	447
0	22,481	66,308	2,718	21,054	13,199	.....	36,971	2,200	27,137	448
0	5,831	54,777	.....	27,805	.....	.....	46,442	.....	8,335	449
.....	12,323	47,391	12,967	15,070	7,734	.....	35,771	4,500	7,120	450
1,924,157	.....	5,881,364	1,958,519	2,919,058	880,904	122,883	5,881,364	.....	.....	451
.....	234	58,175	4,204	39,662	14,274	.....	58,140	.....	35	452
2,500	1,753	21,528	4,501	8,362	5,694	0	18,557	2,000	971	453
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	454
.....	.....	41,071	.....	17,281	9,422	.....	26,827	.....	14,244	455
.....	7,261	37,598	.....	17,578	9,817	.....	27,395	3,000	7,203	456
.....	91	44,200	3,942	32,290	7,982	0	44,214	0	.....	457
.....	6,689	28,406	1,590	12,516	3,157	.....	17,263	4,844	6,299	458
.....	380	8,649	354	5,059	2,189	.....	7,602	560	487	459
.....	315	10,856	92	5,771	2,240	.....	8,103	2,500	253	460
0	7	10,522	1,673	7,359	1,111	0	10,143	0	379	461
2,025	3,093	26,954	3,354	14,011	3,149	0	20,514	5,164	1,276	462
5,000	268	19,905	1,655	8,350	2,216	0	12,221	7,300	384	463
0	3,429	36,887	10,573	17,186	4,231	0	31,990	3,050	1,847	464
.....	22,954	86,604	15,020	32,793	15,793	.....	63,606	.....	22,998	465
.....	5,808	368,558	50,878	211,933	97,777	1,548	362,136	.....	6,422	466
0	0	24,693	760	19,112	4,599	0	24,471	0	222	467
0	42,626	98,126	18,882	25,594	12,073	0	56,549	0	41,577	468
0	0	60,659	35,167	22,072	3,411	.....	60,650	0	0	469
.....	17,643	44,760	15,944	12,989	4,842	.....	33,775	5,000	5,985	470
.....	148,359	353,762	30,550	158,303	52,111	0	240,964	0	112,798	471
.....	61,249	217,294	25,000	104,224	37,403	0	166,627	0	50,667	472
0	8,125	111,275	12,800	75,329	15,814	.....	103,943	0	7,332	473

c Amount due treasurer, $2,553.
d Real estate only.
e Receipts from county taxes are included in column 5.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	NEW YORK—continued.								
474	Waterloo	a$1,480,000	a$2,466,667	$40,000					
475	Watertown	6,300,000	8,400,000	137,000	$9,444	$35,000	$202	$775	$45,421
476	Whitehall	741,889	741,889	25,000	3,029	5,915		426	9,370
477	Yonkers			c325,325	11,759	72,236		74,033	158,028
	NORTH CAROLINA.								
478	Asheville	4,225,000	6,337,500	35,000	2,719	12,375		900*	15,994
479	Charlotte			25,000	2,500	4,500	7,000		14,000
480	Durham	3,289,000		*d750	1,856	7,437	596	106	9,995
481	Fayetteville	1,000,000	2,000,000	e 100	700	0	500	2,000	3,200
482	Goldsboro	1,800,000		15,000		5,955	2,217	166	8,338
483	Newbern*	1,200,000	1,800,000	6,500					
484	Raleigh*	5,379,000		57,810	4,548	(7,106)		39	11,693
485	Salisbury			8,000	600	1,500	700		2,800
486	Winston								
	NORTH DAKOTA.								
487	Fargo			210,000					
488	Grand Forks	2,513,630	3,770,445	80,000	3,595	15,003	0	420	19,018
	OHIO.								
489	Akron	10,889,050	18,148,416	532,500	12,437	99,437		1,974	113,848
490	Alliance	1,855,000	3,091,667	125,000	2,928	0	20,541	861	24,330
491	Ashtabula			60,000					
492	Avondale			75,000					
493	Bellaire*			75,000					
494	Bellefontaine*	2,000,000	3,000,000	50,000	1,747	10,557		277	12,581
495	Brooklyn			30,000					
496	Bucyrus			110,000	2,640	9,667		530	12,837
497	Cambridge			100,000					
498	Canton	10,000,000	10,000,000		10,997	67,170	537		78,704
499	Chillicothe			125,000	5,618	34,183	0	811	40,612
500	Cincinnati	176,000,000		2,000,000		(800,042)		22,128	822,170
501	Circleville	3,250,000	4,875,000	115,000	3,492	14,942	299	482	19,215
502	Cleveland	95,922,585	159,870,975	3,800,000	104,384	(593,539)		14,245	712,168
503	Columbus	44,000,000	88,000,000	1,464,350	39,409	232,297	4,647	1,431	277,754
504	Dayton*	28,000,000		700,000	23,972	189,475	2,205	17,422	233,074
505	Defiance			100,000	3,784	10,156		1,307	15,247
506	Delaware			130,500					
507	Delphos			50,000	6,000		3,000	1,000	10,000
508	East Liverpool	2,124,430	2,124,430	82,000	5,665	15,961		1,701	23,327
509	Elyria			82,500					
510	Findlay	4,120,000	12,360,000	226,900	6,108	49,506		1,130	56,744
511	Fostoria			62,000	2,367	13,186		4,120	19,673
512	Fremont	2,250,000	3,750,000	60,000	3,760	17,852	339		21,951
513	Galion	2,355,290	2,355,290	115,000					16,035
514	Gallipolis	2,421,695	2,421,695	53,950	2,945	12,759	434	34	16,172
515	Greenville	2,750,000		95,000					
516	Hamilton	6,459,110	12,918,220	104,000	9,401	46,765			56,166
517	Ironton	3,000,000	3,000,000	100,000	29,178			671	29,849
518	Jackson*			26,000					
519	Kenton*			57,000					
520	Lancaster	2,875,000		100,000	3,058	17,060	148	255	20,521
521	Lima			160,000	5,918	30,921		21	36,860
522	Lorain			19,725					
523	Mansfield*			220,000					
524	Marietta	2,415,126		40,000	2,770	13,375		583	16,728
525	Marion	94,000		97,000					
526	Martins Ferry			60,000					
527	Massillon*			140,000					
528	Middletown			114,800	3,818	(12,511)		712	17,041

* Statistics of 1888-89.
a Estimated.
b Overdraft, $11,058.
c Real estate only.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888–89).	Total sum available for use during the year.	Expenditures for the school year 1889–90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890–91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
			*$3,779	*$7,298	*$953		*$12,030			474
0	0	$45,421	19,554	22,141	8,605	$322	50,622	$5,857	$0	475
	$1,559	10,929	1,105	7,523	2,182		10,815		$114	476
0	19,482	177,519	72,567	49,816	18,593		140,976		36,534	477
	0		500	10,650	2,100		13,250	1,750	994	478
	0	14,000	0	12,000	2,000	0	14,000	0	0	479
0	1,038	11,033		6,019	1,544	0	7,563	0	3,470	480
0	0	3,200	100	3,000	100	0	3,200	0	0	481
		8,338	483	6,317	824	0	7,624	676	38	482
										483
0	1,079	12,772		13,395	3,223		17,043	142	ƒ0	484
	0	2,800		2,655	145	0	2,800	0	2,800	485
										486
				18,750	12,000	0				487
0	2,951	21,969	985	10,072	10,365		21,322		647	488
	46,329	160,177	25,017	51,956	27,609		104,582	10,000	45,595	489
$9,000	6,063	39,393	8,494	11,497	3,426		23,417	2,540	13,436	490
		33,871		9,050			21,861			491
		18,083					13,863			492
		35,172		14,998			25,622			493
0	7,186	19,767		9,300	2,224		11,524		8,243	494
		12,340		6,500			10,654			495
	7,487	20,324	0	8,830	2,926	0	11,756		8,568	496
		27,449		8,955			18,579			497
20,373	30,070	129,147	27,321	40,025	15,211	0	82,557	8,557	38,033	498
0	14,315	54,927	961	26,885	8,821		36,667		18,260	499
0	46,885	869,055	56,703	620,268	114,229	0	791,140	0	77,915	500
0	15,418	34,633	0	15,804	3,557	0	19,361	2,000	13,272	501
368,311	0	1,080,479	307,074	489,235	173,625		969,934	118,610	g0	502
52,365	60,446	390,565	152,974	167,774	46,321	895	368,464	0	22,101	503
0	43,219	276,293	47,929	127,597	36,468	0	211,994	0	64,299	504
	10,855	26,102	0	9,919	7,213	80	17,212	0	8,889	505
		21,509		16,074			20,979			506
13,000	3,000	26,000	14,000	10,000	2,000		26,000		0	507
	4,163	27,490	4,172	12,234	8,148	0	24,554		2,936	508
		27,002		11,604			14,349			509
52,799	9,646	119,389		26,801			99,938		19,451	510
19,987	14,477	54,137	11,993	9,598	3,243		24,834	5,520	23,783	511
	9,534	31,485	3,533	12,417	4,545	50	20,545		10,940	512
	1,068	17,093		10,273	3,648		13,921		3,172	513
	2,956	19,128	666	10,345	2,899		13,910		5,218	514
		29,882		12,065			20,209			515
22,241	15,909	94,316	18,093	32,269	9,528		59,890	10,000	24,426	516
	3,421	33,270		18,559	8,370		26,929		6,341	517
		19,486		7,950			11,759			518
		27,644		11,269			17,352			519
	8,146	28,667		15,935	6,197		22,132		6,535	520
25,855	19,612	82,327	14,079	26,587	7,076		41,742	4,925	35,660	521
		26,319		7,675			14,461			522
		60,147		23,037			30,218			523
	5,290	22,018	333	12,499	4,356		17,188		4,830	524
		46,699		8,605			38,220			525
		48,736		21,399			36,243			526
		57,891		15,499			52,833			527
	9,610	26,651		13,045	10,701	0	23,947		2,704	528

d No buildings are owned.
e The buildings used as school houses are owned by churches.
f Deficit, $4,413.
g Overdraft, $8,065.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	OHIO—continued.								
529	Mount Vernon	$2,300,000	$6,225,000	$90,000					
530	Nelsonville	765,000	1,530,000	51,000	$2,435	$10,048		$903	$13,386
531	New Philadelphia.*			50,000					
532	Newark	6,050,000	9,075,000	141,800	6,745	38,763		5,216	a0,724
533	Niles	625,000		62,000	2,201	7,641		763	10,605
534	Norwalk	2,772,667	2,772,667	73,080	3,667		$21,721	80	25,468
535	Oberlin			72,000					
536	Painesville	2,552,695	2,552,695	64,790	1,819	12,277	1,035		15,131
537	Piqua	3,761,930	6,269,888	120,000	4,905	22,323		763	27,991
538	Pomeroy								
539	Portsmouth			180,000	6,397	26,319	91	1,817	34,624
540	Salem			75,000	19,961			467	20,428
541	Sandusky	6,302,867	14,006,260	*250,000	9,973	42,325	0	185	52,483
542	Sidney	2,257,440		54,000					21,413
543	Springfield	1,667,000	2,530,500	290,000	14,448	80,404	813	3,872	91,086
544	Steubenville	5,334,580	5,334,580	160,000	7,064	37,347	0	597	45,008
545	Tiffin	3,200,000	3,200,000	125,000	4,631		19,628		
546	Toledo	31,500,000	63,000,000	900,000	40,126	165,871	1,037	1,395	208,429
547	Troy	2,479,380	4,427,464	95,500	1,948	22,231		2,997	27,176
548	Urbana			103,000	2,874	23,319		334	25,527
549	Van Wert	1,420,000		70,000					
550	Warren*			114,400					
551	Washington, C.H.	2,584,655	3,876,983	60,000	2,372	15,468		356	18,196
552	Wellsten	1,000,000	1,500,000	16,000	2,237	6,565	45		8,847
553	Wellsville			46,000					
554	West Cleveland			26,000					
555	Wooster			150,000	3,066	15,800	82	163	19,111
556	Xenia	4,000,000	4,000,000	81,000	3,303	24,697		3,304	31,304
557	Youngstown	6,500,000	16,125,000	450,000	13,492	40,026		490	94,898
558	Zanesville			250,000	9,546	49,309		1,784	60,639
	OREGON.								
559	Astoria			100,500	11,164	10,895	2,229		24,288
560	East Portland			142,750	3,220	12,452	13,808	12,452	42,932
561	Portland	25,614,500	76,843,770	407,157		68,045	69,946		137,991
562	Salem	1,700,637	5,101,911	57,260	59,151	4,441	(b)	411	14,003
	PENNSYLVANIA.								
563	Allegheny	59,875,425	59,875,425	1,259,115	23,482	108,647		0	186,129
564	Allentown	9,223,351	12,842,277	488,000	7,793	256	76,889	832	85,760
565	Altoona	13,162,106	16,216,141	325,550	7,812	58,235	0	466	66,613
566	Archbald				755	8,638		1,208	10,595
567	Ashland	1,380,600	2,761,200	42,500	2,297	12,371	61		14,729
568	Beaver Falls	*3,500,000	*3,500,000	*79,000	2,326	20,497			22,823
569	Bethlehem	3,463,390	3,463,390	118,329	1,502	15,032	363	336	17,532
570	Bloomsberg			55,000	1,399	9,464			
571	Braddock				1,468	12,877		74	14,419
572	Bradford	1,723,000	1,723,000	55,000	2,207	25,503		1,019	28,729
573	Bristol	2,159,275	3,239,013	36,200	1,767	9,906		104	11,777
574	Butler	1,799,796	2,699,694	80,000	1,207	16,507	14	187	17,915
575	Carbondale	1,138,894	5,694,470	66,250	2,496	18,788		7,000	28,284
576	Carlisle	2,341,877		65,000	2,224	12,788		439	15,451
577	Chambersburg			56,000	2,334	11,664		456	14,954
578	Chester	8,560,000	12,840,000	169,000	6,036	40,090		469	46,595
579	Columbia	2,634,086	4,389,247	45,300	3,041	0	0	15,265	18,306
580	Connellsville	1,267,235		42,000	1,579	10,632	0	129	12,341
581	Conshohocken	3,035,250	4,552,872	42,000	1,607	12,142		2,256	14,397
582	Corry	1,500,000	1,500,000	67,601	1,692	16,545		266	18,503
583	Danville	1,000,000	3,000,000	85,000	2,502	13,292	27	307	16,230
584	Du Bois	*472,125	*472,125	*20,500	1,171				
585	Dunnmore			42,000	1,815	13,278	56	4,856	20,006

*Statistics of 1888-89.

a Interest on bonds is included in column 18.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888-89).	Total sum available for use during the year.	Expenditures for the school year 1889-90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890-91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
.....	.....	$23,510	.....	$12,591	.....	.....	$20,225	.....	.....	529
.....	$4,071	17,457	$316	6,851	$2,974	.....	10,141	$2,969	$5,347	530
.....	.....	19,199	.....	6,900	.....	.....	9,297	.....	.....	531
$10,542	9,073	70,339	200	26,411	11,641	.....	38,252	6,797	25,290	532
1,000	2,716	14,321	.....	6,581	.....	.....	10,152	.....	4,248	533
.....	12,258	37,726	3,000	15,043	5,798	.....	23,841	.....	13,885	534
.....	.....	29,799	.....	9,799	.....	.....	13,492	.....	.....	535
.....	11,885	27,016	403	11,250	3,451	.....	15,104	.....	11,912	536
20,738	8,304	57,033	14,129	15,043	10,847	.....	40,019	4,000	13,014	537
.....	2,036	12,922	.....	8,922	.....	.....	10,885	.....	2,037	538
.....	8,397	43,621	.....	21,362	6,584	.....	27,946	6,000	9,675	539
.....	11,127	31,555	3,017	12,225	5,049	.....	20,291	3,150	8,114	540
0	22,080	74,563	11,488	29,765	a7,235	.....	.....	a7,926	18,149	541
.....	.....	26,789	.....	11,640	7,302	.....	18,942	.....	2,470	542
13,690	16,223	128,949	13,000	63,914	18,739	0	95,653	0	33,296	543
.....	30,974	75,982	9,478	26,488	7,569	$793	44,328	.....	31,654	544
.....	17,317	41,576	1,400	14,628	6,301	.....	22,329	3,180	16,067	545
.....	38,064	246,493	39,803	108,906	27,577	.....	176,286	38,090	32,117	546
.....	.....	34,479	.....	13,232	7,149	.....	20,381	5,675	8,423	547
6,324	9,177	41,028	5,894	14,140	4,567	.....	24,601	5,000	11,427	548
.....	.....	31,522	.....	11,815	.....	.....	20,479	.....	.....	549
.....	.....	25,507	.....	12,635	.....	.....	22,214	.....	.....	550
12,981	6,315	37,491	3,020	10,850	4,418	.....	18,288	9,470	9,733	551
5,228	5,247	19,322	3,670	5,762	3,850	.....	13,282	.....	6,040	552
.....	.....	41,312	.....	.....	.....	.....	13,083	.....	.....	553
.....	.....	14,700	.....	4,275	.....	.....	9,750	.....	.....	554
.....	11,529	30,640	.....	15,362	1,926	.....	17,288	.....	13,352	555
0	8,589	39,893	.....	19,493	9,012	400	28,906	4,237	6,751	556
43,727	31,808	138,533	.....	40,378	41,824	.....	82,202	15,000	41,331	557
0	23,551	84,173	.....	41,184	.....	.....	52,039	.....	.....	558
0	6,840	31,138	1,309	12,270	10,728	.....	24,307	.....	6,831	559
0	810	43,778	3,157	13,128	4,156	0	20,441	2,063	21,274	560
.....	26,208	164,199	14,000	107,351	27,741	0	149,092	10,000	5,107	561
0	1,634	15,637	1,404	9,023	3,339	0	13,766	0	1,871	562
0	0	186,129	.....	148,936	33,807	3,386	186,129	63,615	c0	563
.....	3,933	89,143	724	35,775	32,514	.....	69,013	15,400	4,730	564
50,000	21,690	138,303	33,720	37,992	26,106	.....	97,818	12,000	28,485	565
.....	.....	.....	603	4,891	4,647	.....	10,141	.....	.....	566
.....	440	15,169	.....	8,379	5,090	220	13,689	1,000	480	567
.....	.....	.....	1,361	12,622	8,597	.....	22,580	.....	.....	568
30,775	50	48,357	25,154	9,582	8,692	.....	43,428	3,800	1,129	569
.....	.....	30,807	22,258	5,461	3,976	.....	31,695	.....	.....	570
.....	18	14,437	.....	8,313	2,514	.....	10,827	4,015	.....	571
3,528	9	32,286	2,120	18,181	10,115	.....	30,416	1,800	50	572
.....	2,387	14,164	.....	6,140	2,841	.....	8,981	3,600	1,583	573
17,000	0	34,915	13,800	10,619	6,583	0	31,002	1,295	2,618	574
5,000	2,354	36,238	21,136	11,922	3,052	0	36,120	0	118	575
9,000	5,922	30,373	14,570	9,766	1,735	.....	26,071	3,000	1,302	576
.....	.....	14,954	.....	13,175	4,563	.....	17,738	.....	c0	577
17,500	363	64,458	3,222	28,920	9,387	.....	41,529	22,500	429	578
6,000	0	24,306	0	12,319	4,561	0	16,880	7,079	347	579
0	3,710	16,051	.....	7,932	5,006	0	12,938	2,500	613	580
0	0	14,397	0	6,846	4,843	0	11,689	0	2,708	581
.....	992	19,495	1,434	8,390	3,803	.....	13,627	5,000	868	582
.....	28	16,248	.....	10,008	6,030	.....	16,038	.....	210	583
.....	.....	11,558	575	5,926	3,594	.....	10,095	.....	.....	584
.....	3,680	23,686	252	10,874	2,090	.....	13,216	.....	10,470	585

b Receipts of county taxes are included in column No. 5.
c Account overdrawn.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	PENNSYLVANIA—continued.								
586	Easton	$8,417,000	$8,417,000	$269,229	$4,706	$50,207	$949	.....	$55,862
587	Erie	.....	.....	*256,700	8,529	100,473	1,493	$334	110,829
588	Franklin	.....	.....	.....	1,695	20,474	.....	.....	.....
589	Greensburg	.....	.....	.....	1,031	12,510	.....	1,222	14,763
590	Harrisburg	19,916,435	19,916,435	420,098	9,177	82,597	.....	4,835	96,610
591	Hazleton	.....	.....	75,000	2,597	23,116	.....	330	26,043
592	Homestead	.....	.....	.....	842	14,724	.....	.....	15,566
593	Huntingdon	.....	.....	*65,000	1,709	($10,421)	.....	.....	12,130
594	Johnstown	.....	.....	.....	3,216	*a*0	0	11,760	14,976
595	Lancaster	11,000,000	11,000,000	276,600	9,795	49,424	.....	607	59,826
596	Lansford	.....	.....	.....	1,123	7,598	.....	741	9,462
597	Lebanon	.....	.....	250,000	3,454	23,032	.....	2	26,488
598	Lock Haven	1,600,000	4,800,000	65,000	2,591	12,751	.....	1,290	16,632
599	McKeesport	.....	.....	140,000	3,229	38,372	.....	637	42,238
600	Mahanoy City	.....	.....	60,000	7,341	15,943	.....	.....	23,283
601	Mauch Chunk	.....	.....	.....	1,309	11,424	0	0	12,733
602	Meadville	2,000,000	4,000,000	175,000	3,271	28,200	.....	1,428	32,899
603	Middletown	.....	.....	.....	1,150	8,494	.....	.....	9,644
604	Milton	.....	.....	.....	1,129	6,393	.....	1,139	8,661
605	Monongahela	.....	.....	.....	1,227	10,580	.....	806	12,613
606	Mount Carmel	.....	.....	.....	1,563	10,310	.....	.....	.....
607	Nanticoke	807,000	1,794,000	58,000	2,940	12,138	.....	.....	18,740
608	New Brighton	2,500,000	2,500,000	50,000	1,408	13,662	.....	938	16,008
609	New Castle	3,600,000	5,475,000	15,000	3,013	25,140	.....	880	29,033
610	Norristown	7,250,000	9,666,667	180,000	5,063	35,044	.....	1,153	41,260
611	Oil City	.....	.....	.....	2,761	23,156	.....	.....	.....
612	Olyphant	.....	.....	.....	742	7,874	.....	1,526	10,142
613	Philadelphia	688,713,518	765,237,242	8,150,223	.....	2,962,795	.....	.....	2,962,795
614	Phoenixville	3,002,693	4,504,539	50,000	2,475	16,962	.....	423	19,860
615	Pittsburg	182,000,000	182,000,000	2,230,000	51,802	597,516	.....	11,829	661,148
616	Pittston	760,000	3,040,000	80,000	2,565	14,366	8	433	17,372
617	Plymouth	978,000	6,780,000	45,000	2,490	13,996	.....	22	16,508
618	Pottstown	4,581,855	9,163,710	115,164	3,657	26,969	.....	2,944	33,507
619	Pottsville	4,011,915	12,035,745	230,000	2,786	.....	31,730	1,645	38,151
620	Reading	23,500,000	35,250,000	414,800	20,544	105,100	95	.....	125,739
621	Renova	467,021	1,401,063	3,200	1,316	8,574	.....	265	10,155
622	Scranton	.....	.....	500,000	17,696	194,485	.....	7,127	219,308
623	Shamokin	850,000	4,250,000	89,000	3,582	35,145	.....	.....	38,727
624	Sharon	.....	.....	50,000	1,748	13,280	.....	.....	15,028
625	Sharpsburg	.....	.....	.....	966	5,922	.....	.....	6,888
626	Shenandoah	1,866,050	5,598,150	91,000	4,047	26,077	.....	729	30,853
627	South Bethlehem	.....	.....	.....	1,899	16,329	.....	.....	.....
628	South Easton	2,227,000	3,340,500	53,000	1,557	13,300	.....	129	14,986
629	South Chester	.....	.....	.....	1,268	15,819	.....	7,045	24,132
630	Steelton	3,452,495	3,452,495	100,400	1,594	16,753	.....	70	18,418
631	Sunbury	.....	.....	.....	1,881	9,702	.....	.....	11,583
632	Tamaqua	*1,939,685	*2,399,370	*46,600	2,024	9,097	.....	2,411	13,532
633	Tarentum	.....	.....	.....	601	7,510	.....	.....	8,111
634	Titusville	1,372,753	2,287,922	65,775	2,852	26,290	.....	1,938	31,080
635	Towanda	.....	.....	.....	1,143	11,201	.....	.....	.....
636	Tyrone	.....	.....	.....	1,214	8,337	.....	.....	9,551
637	Uniontown	*1,800,000	*3,600,000	50,000	1,682	9,741	.....	.....	.....
638	Warren	1,925,151	2,887,731	30,000	1,314	10,975	691	77	13,057
639	Washington	*2,921,077	*2,921,077	45,150	1,597	16,826	.....	508	18,931
640	West Chester	5,802,000	5,802,000	109,000	2,342	21,021	.....	194	23,557
641	Wilkesbarre, district No. 1.	.....	.....	.....	3,180	38,801	.....	.....	.....
642	Wilkesbarre, second district.	719,231	.....	75,000	1,200	.....	18,000	150	19,350
643	Wilkesbarre, third district.	2,800,000	16,800,000	170,000	3,882	43,799	216	17,049	64,946
644	Wilkinsburg	.....	.....	.....	760	13,779	.....	29,538	44,077
645	Williamsport	8,265,393	16,530,786	219,000	10,587	67,698	.....	887	79,172
646	York	9,200,000	12,266,667	184,500	6,119	43,498	.....	306	49,923

* Statistics of 1888-89.

a No tax raised on account of the destruction of property by the flood of May 31, 1889. The schools were supported principally by public contributions.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888-89).	Total sum available for use during the year.	Expenditures for the school year 1889-90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890-91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
$46,655	$1,380	$104,197	$23,807	$28,846	$19,801	.....	$72,454	$30,885	$888	586
.....	248	111,077	23,223	57,225	25,227	.....	105,675	708	4,694	587
.....	.....	24,039	4,216	13,055	6,204	.....	23,475	.....	.....	588
.....	.....	14,763	1,571	7,133	2,775	.....	11,479	.....	.....	589
84,378	2,517	183,505	52,476	58,943	18,698	0	130,117	51,900	1,488	590
.....	3,265	29,309	10,485	14,332	3,510	.....	28,327	200	782	591
.....	.....	15,566	4,592	8,815	4,759	.....	18,166	.....	.....	592
0	0	12,130	1,955	9,577	2,417	.....	13,949	.....	.....	593
.....	.....	.....	2,413	10,480	4,021	.....	16,914	.....	.....	594
20,318	.....	80,144	24,086	39,055	16,108	.....	79,249	.....	895	595
.....	.....	.....	1,383	5,101	2,999	.....	9,483	.....	.....	596
38,000	2,299	66,787	19,608	13,697	4,401	.....	37,706	2,641	26,439	597
0	0	16,632	1,346	10,575	5,712	.....	17,633	0	0	598
35,000	789	78,027	.....	26,143	13,231	.....	39,374	.....	38,653	599
.....	.....	.....	1,791	11,693	6,263	.....	19,747	.....	.....	600
0	0	12,733	865	6,627	3,121	.....	10,613	.....	.....	601
8,556	3,163	44,618	11,465	22,465	10,195	.....	44,125	.....	493	602
.....	.....	.....	908	5,320	3,116	.....	9,344	.....	.....	603
.....	.....	.....	834	4,708	2,200	.....	7,742	.....	.....	604
.....	.....	.....	1,346	5,962	3,772	.....	11,080	.....	.....	605
.....	.....	41,272	20,854	6,225	14,187	.....	41,266	.....	.....	606
2,461	830	22,031	990	12,138	4,315	$354	17,827	4,000	204	607
28,696	949	45,653	16,448	8,430	3,977	90	28,945	16,500	208	608
3,230	118	32,381	1,770	19,786	6,198	.....	27,754	4,535	92	609
6,894	3,350	51,504	2,836	28,507	10,216	.....	41,559	6,894	3,051	610
.....	.....	32,499	1,838	17,932	12,259	.....	32,029	.....	.....	611
.....	.....	.....	5,235	3,690	961	.....	9,886	.....	.....	612
.....	148,181	3,110,976	402,202	1,568,124	733,876	38,192	2,742,394	0	b328,213	613
.....	337	20,197	459	11,109	3,804	.....	15,372	3,308	1,517	614
48,000	139,536	848,684	61,222	361,144	121,165	3,962	547,493	131,885	169,306	615
5,000	6,182	28,554	13,695	9,410	2,552	300	25,957	1,510	1,087	616
.....	307	16,815	5,005	8,226	1,807	278	15,316	.....	1,499	617
5,286	175	39,031	849	16,533	8,058	.....	25,440	5,820	7,771	618
2,500	28	40,685	.....	25,555	9,984	194	35,733	3,500	1,455	619
23,000	10,853	159,592	37,957	69,177	24,955	710	132,799	16,000	10,698	620
1,700	0	11,855	874	5,356	3,729	0	9,959	0	1,685	621
.....	66,431	285,739	87,360	103,801	37,335	2,651	231,147	1,094	53,488	622
.....	.....	.....	21,276	13,357	3,883	.....	38,515	.....	211	623
.....	.....	15,028	3,480	12,727	2,232	0	18,439	.....	.....	624
.....	.....	6,888	311	4,406	1,278	0	5,995	0	893	625
4,500	305	35,658	2,486	19,827	7,561	702	30,576	4,500	582	626
.....	.....	44,957	22,268	11,257	13,026	.....	46,551	.....	.....	627
.....	2,883	17,889	3,006	9,149	2,232	.....	14,388	.....	.....	628
.....	.....	.....	9,694	8,143	6,201	.....	24,038	.....	.....	629
7,000	1,610	27,028	4,000	12,315	3,352	.....	19,667	7,300	61	630
.....	.....	.....	2,803	7,205	3,721	.....	13,729	.....	.....	631
.....	.....	.....	816	6,598	2,532	.....	9,947	.....	.....	632
.....	.....	.....	453	5,080	2,558	.....	8,091	.....	.....	633
.....	10,785	41,865	.....	18,188	9,557	.....	27,745	.....	14,120	634
.....	.....	14,552	1,067	7,377	2,058	.....	11,502	.....	.....	635
.....	.....	.....	1,192	7,792	3,176	.....	12,160	.....	.....	636
.....	.....	13,065	1,185	7,179	3,528	.....	11,902	.....	.....	637
.....	1,032	14,089	.....	10,142	3,311	.....	13,453	1,110	c0	638
1,400	0	20,331	302	9,872	1,908	.....	12,082	7,849	400	639
.....	.....	23,557	.....	13,235	5,385	.....	18,620	3,500	1,436	640
.....	.....	50,161	17,909	25,901	6,297	.....	50,107	.....	.....	641
.....	47	19,397	.....	12,620	6,383	315	19,318	.....	79	642
8,108	11,833	84,887	49,468	24,857	9,632	.....	83,957	3,050	.....	643
.....	.....	44,077	6,505	7,609	8,104	.....	22,218	.....	.....	644
6,800	2,786	.....	18,694	42,350	24,664	.....	85,708	.....	.....	645
7,000	6,545	63,468	18,701	22,150	6,540	.....	47,391	7,200	8,817	646

b Balance merged, $40,369.
c Deficit, $474.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	RHODE ISLAND.								
647	Bristol	$5,069,400		$80,000					
648	Central Falls			100,000		88,354	$15,230	$3,588	$27,172
649	East Providence[a]	6,839,516		81,545	$3,698	20,170		1,306	25,174
650	Newport	28,804,800	$38,406,400	178,250	6,239	46,365		6,792	59,396
651	Olneyville			51,000	3,423	8,600	803	953	13,782
652	Pawtucket	24,395,925	24,395,925	354,228	8,205	108,320		694	117,319
653	Providence	140,477,340	140,477,340	1,175,798	27,948	226,500	34,437	113,779	402,664
654	Westerly [d]	5,593,000	5,593,000	72,550	3,330	64,000	c14,610	3,805	25,745
655	Woonsocket	9,953,975	13,271,967	170,000	6,436	27,600	0	1,168	35,204
	SOUTH CAROLINA.								
656	Charleston	21,425,652	21,425,652	149,334	40,115	31,184	1,423	15,509	91,306
657	Columbia	3,500,000	8,750,000	34,000	3,277	6,470	693	600	11,040
658	Greenville	2,064,463	6,193,389	25,000	1,481	4,245	800		6,526
659	Spartanburg	1,427,000	2,854,000	18,080	1,621	3,243	0	220	5,084
	SOUTH DAKOTA.								
660	Sioux Falls	5,657,894	5,657,894	350,000	10,647	26,132			
	TENNESSEE.								
661	Chattanooga	14,000,000	14,000,000	90,000	(d)	23,586	d14,016	894	38,496
662	Clarksville	3,538,121	5,898,860	34,652	6,703	4,463		414	11,581
663	Columbia				2,000	6,180		105	8,285
664	Jackson			*12,700		6,610	8,302		14,912
665	Johnson City								
666	Knoxville	5,896,450	9,827,416	102,000	(e)	(e)	e35,149	2,203	37,352
667	Memphis	29,977,750	42,825,357	375,000	49,269	53,324	(f)	2,848	105,441
668	Nashville	33,567,725	50,351,588	297,100					
	TEXAS.								
669	Austin	7,990,643	13,656,529	87,000	16,016	27,852	764	6,391	51,023
670	Brenham	1,987,875	2,650,500	28,500	4,868	7,782	0	0	12,650
671	Brownsville	902,805	1,203,840	27,000	6,976	131	300		7,407
672	Corpus Christi			25,000	4,424	1,413	810	205	6,852
673	Corsicana	3,000,000	5,000,000	87,100	6,899	11,389	1,033	346	19,667
674	Dallas			214,000	30,628	5,383	16,643	1,158	53,812
675	Denison	4,400,327	8,800,654	235,500	6,836	11,019	485	1,185	19,525
676	El Paso	6,624,500	6,624,500	50,000	4,172	5,356	0	172	9,700
677	Forth Worth	16,300,000	27,166,667	106,430	14,180	41,903	1,653		57,736
678	Gainesville			82,850	5,676	14,053	888	5,075	25,692
679	Galveston	21,000,000		303,500	35,120	44,236	831	359	80,546
680	Greenville				4,656	3,541	291	980	9,468
681	Houston	10,000,000	15,000,000	130,540	22,086	19,500		444	42,030
682	Laredo				8,132				8,132
683	Marshall	*2,046,930		4,400	5,924		30	51	6,276
684	Palestine			32,700	4,488	3,186		482	8,156
685	Paris	3,864,992	7,729,984	65,100	9,976	7,381	680	335	18,372
686	San Antonio			224,800	40,616	21,898		500	
687	Sherman	*2,800,000	*4,666,667	77,400	6,896	9,924	345	335	17,500
688	Temple			11,275	2,008	4,526		563	7,097
689	Tyler			53,600	4,616	7,758	1,891		
690	Waco	7,000,000	7,000,000	124,000	12,090	18,450	428		45,028
	UTAH.								
691	Logan			19,895	2,966	70		5,582	8,618
692	Ogden City	9,000,000	9,000,000	132,750	6,180	9,007	0	35	15,222
693	Parvo City	2,000,000	2,000,000	9,968	3,174	4,190		1,508	8,875
694	Salt Lake City	52,000,000	52,000,000	296,333	18,993				

a This report includes the entire town.
b From town taxes
c From school district taxes.
d Receipts from State taxes are included in column 7

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1889–90).	Total sum available for use during the year.	Expenditures for the school year 1889–90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890–91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
		$13,370		$9,285	$3,744	$341	$13,370			647
0	$89	27,201		13,252	3,990	450	17,692	$9,212	$297	648
0	1,609	23,783	$1,687	16,068	4,732	659	23,146			649
	21,897	81,283	518	38,527	13,695	1,023	53,763			650
0	1,162	14,944	0	12,219	772	0	12,991	0	1,953	651
	47,672	164,991	24,352	55,026	24,402	3,322	107,102		57,889	652
			101,774	228,853	49,826	22,201	402,654			653
0	742	26,487	1,308	(19,604)		413	21,325	4,444	718	654
	7,045	42,249	1,350	21,344	10,273	1,185	34,152		8,097	655
	3,075	91,306	16,025	71,716	3,216		90,957		349	656
0	152	11,192		10,548	1,000				0	657
0	9	6,526		5,494	1,032		6,526		0	658
0	0	5,084	300	4,105	586	0	4,991	0	93	659
	3,993	40,772		20,300	5,500		32,545		7,627	660
	7,775	46,271		33,173	4,642		37,815		8,456	661
	2,403	13,984	108	10,639	1,761		12,508		1,476	662
0	900	9,185					7,261		1,924	663
0	2,532	17,444	0	7,817	905	0	8,722	0	8,722	664
				3,032	1,019		4,051			665
	518	37,870		32,802	5,068		37,870		0	666
$104,000	0	209,441	118,178	48,204	18,973		185,355	10,757	13,329	667
				94,345	15,741		110,086			668
14,200	319	65,542	2,513	37,269	11,425	0	51,207	14,200	135	669
0	856	13,506	750	11,108	1,542	0	13,400	0	106	670
	663	8,070	2,777	3,186	1,463		7,426		644	671
0	39	6,891	677	4,843	663		6,183		708	672
0	0	19,667	869	12,891	4,719	0	18,479	0	(g)	673
0	0	53,812	940	33,416	14,466	0	53,812	0	0	674
0	0	19,525	359	13,871	3,342	0	17,572	0	1,953	675
0	15,442	25,142	10,134	12,468	2,525	0	25,127	0	15	676
90,000	12,088	159,824	13,576	34,576	9,451		57,603	90,000	12,222	677
0	2,037	27,728		17,775	9,547		27,322		407	678
0	10,378	90,924	5,705	57,562	8,662	0	72,129	0	18,795	679
0	594	10,062	916	7,944	496		9,356		706	680
	819	42,839	2,000	32,766	6,664		41,430	500	810	681
	1,909	10,041	152	6,180	1,039		7,371		2,670	682
	1,085	7,361	563	5,769	961		7,313		48	683
0	1,601	9,757	0	8,000	1,096		9,096		661	684
10,000	4,368	32,740	9,996	15,987	4,480		30,463		2,277	685
	422	63,436	5,116	58,302	7,470		70,888		i0	686
0	94	17,643		12,403	2,177		14,580		3,064	687
0	77	7,174	1,785	3,920	1,754		7,459		j0	688
	43	36,399	16,212	10,299	9,529	0	36,040	0	359	689
	764	45,792	2,776	35,567	6,685		45,028		764	690
	1,642	10,286	4,386	3,700	1,259	0	9,345	0	921	691
0	1,340	16,562	1,930	9,740	3,044	0	14,714	0	1,848	692
0	1,093	9,968	2,725	5,434	1,424		9,583		385	693
										694

e Receipts from State and city taxes are included in column 7.
f Receipts from county taxes are included in column 6.
g $530 transferred to the sinking fund.
h $7,452 expended in excess of receipts.
i Deficit, $285.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	VERMONT.								
695	Barr								
696	Brattleboro	$3,530,186	$3,530,186	$100,000	$4,626	0			
697	Burlington	10,716,431	10,716,431	85,000	1,790	$27,000		$1,036	$29,826
698	Rutland	6,300,000		95,000	0	24,543	0	2,050	26,593
699	St. Albans	2,569,231	2,569,231	50,000	3,151	8,930		905	12,986
	VIRGINIA.								
700	Alexandria	4,361,940	4,361,940	35,000	7,140	10,000			17,140
701	Charlottesville								
702	Danville			a18,900	4,309	11,070	0	0	15,379
703	Fredericksburg	1,528,675	1,528,675	11,713	2,218	2,650		265	5,133
704	Lynchburg	10,000,000		75,000	8,775	21,656	0	1,663	32,094
705	Manchester			30,000	3,426	3,961			7,387
706	Norfolk			72,965	10,365	15,630	$341		26,336
707	Petersburg	9,706,445	9,706,445	72,000	10,227	13,755	0	452	24,434
708	Portsmouth			52,450	4,624	8,598	0	513	13,735
709	Richmond	36,000,000	36,000,000	390,500	31,282	107,059	0	2,719	141,060
710	Roanoke			28,000	4,212		0	1,400	5,612
711	Staunton	2,684,366	2,684,366	36,000	2,688	7,250	0	1,329	11,267
712	Winchester	2,367,317	3,367,317	16,000	2,455	3,300		904	9,659
	WASHINGTON.								
713	Seattle	1,600,000	4,000,000	200,000	5,291		84,739		90,030
714	Spokane Falls	8,500,000	17,000,000	194,400	0	40,780	19,345	294	60,419
715	Tacoma			377,150		(52,399)			52,339
716	Wallawalla	3,100,000	6,200,000	98,000			43,383		44,358
	WEST VIRGINIA.								
717	Charleston	2,600,000	2,600,000	70,000	2,079	(18,993)		1,286	22,358
718	Huntington	2,239,894	3,733,157	53,798	2,371	16,800	1,172	30	20,373
719	Martinsburg	1,707,472	2,561,208	45,000	2,487	9,693	0	2,060	14,240
720	Parkersburg*	4,467,375	6,700,000	109,000	21,755			208	
721	Wheeling			300,000	11,470	65,376	1,143		77,989
	WISCONSIN.								
722	Appleton			156,500	8,001	28,100	4,771	1,532	42,404
723	Baraboo	1,800,000	2,700,000	58,000	1,629	10,465	1,722	931	14,747
724	Beloit	2,111,544	3,519,240	101,150	2,712	9,000	2,187	871	14,770
725	Berlin	*1,002,635	*1,503,952	*54,800	2,224	7,000	1,814	790	11,828
726	Chippewa Falls	1,500,000	4,500,000	62,800	3,306	7,000	4,500	335	15,241
727	Eau Claire	5,557,561	9,262,602	125,000	6,993	29,000	6,770	97	42,860
728	Fond du Lac	3,252,920		200,000	6,669	13,000	6,669	937	27,275
729	Fort Howard	1,000,000	1,000,000	50,000	2,123	4,957	2,075	373	9,528
730	Green Bay	2,574,000	3,861,000	75,800	3,949	15,815	3,607	109	23,480
731	Janesville*			165,600	5,657	15,000	5,657	6,246	32,560
732	Kenosha*	1,500,000	1,500,000	42,750	2,838	5,000	2,450	272	10,560
733	La Crosse	10,734,384	10,734,384	239,500	10,695	41,000	10,487	588	62,770
734	Madison	6,617,390	9,926,098	240,000	6,089	25,885	5,906	862	38,742
735	Marinette	3,225,298	6,450,596	65,000	4,027	15,983	3,587	401	23,778
736	Menasha			12,800	2,356	4,460	2,011	27	8,854
737	Menomonee	1,776,734	2,665,101	36,300	2,310	14,000	2,241	201	18,752
738	Merrill	2,117,542	2,117,542	29,250	1,852	8,000	800	2,345	12,997
739	Milwaukee	100,498,200	100,498,200	1,332,075	90,408	326,458		2,891	419,757
740	Neenah	1,555,500	2,592,500	54,100	2,556	3,106	2,556	5,020	13,238
741	Oconto	1,286,934	1,286,934	23,680	1,919	3,035	1,943	344	7,141
742	Oshkosh	7,500,000	11,250,000	170,000	10,790	4,000		160	54,950
743	Portage*	1,400,000	2,100,000	47,000	2,288	4,984	2,288	344	9,904
744	Racine	9,042,300	9,042,300	140,000	20,630	22,000	10,410	1,856	54,896
745	Sheboygan	4,500,000	4,500,000	200,000	6,703	25,461	7,815	382	40,421

* Statistics of 1888-89.
a Teacher received no extra compensation for service in night schools.
b The items amount to $42,427.

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888-89).	Total sum available for use during the year.	Expenditures for the school year 1889-90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890-91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
										695
	$228	$20,509		$9,600	$6,000		$15,600	$2,500		696
	223	30,049	$2,452	19,668	6,522		28,642	1,500	0	697
0	102	26,695	8,184	13,364	2,681	$200	24,429	2,000	$266	698
$1,700	6	14,692		9,793	1,862		11,655	3,000	37	699
	584	17,724	1,093	13,640	2,991		17,724			700
	0									701
0		15,379	389	12,789	2,201	0	15,379	0	0	702
	938	6,071	468	4,720	883		6,071			703
0	123	32,217	1,449	26,808	3,878	0	32,135	0	82	704
	166	7,553	270	5,445	1,681		7,394		159	705
	707	27,043		20,141	5,152		25,293		1,750	706
0	48	24,482	0	19,837	4,645	0	24,482	0	0	707
0	0	13,735		11,050	2,685	(a)	13,735	0	0	708
0	0	141,060	1,640	117,587	20,424	1,409	141,060	0	0	709
0	0	5,612		5,227	1,436	0	6,663		0	710
0	154	11,421	176	8,556	1,425	0	10,157	0	1,264	711
	177	6,836	382	4,768	1,035		6,185		651	712
	0		99,800	54,143	24,809	0	178,752			713
0	0	60,419	34,130	18,750	5,478		58,358		2,031	714
103,543	1,536	157,418	57,545	43,296	17,641				26,328	715
	30,667		44,358	9,129	5,619		59,106			716
16,805	1,043	39,206	10,310	13,331	8,167	0	31,808	0		717
0	0	20,373	1,158	11,597	4,680	0	17,435			718
0	2,087	16,327	0	8,475	4,085		12,560	860	2,907	719
	6,936	38,923	11,045	19,209	6,290	0	36,544	0	2,380	720
	862		17,000	66,465	8,431	0	91,896	17,500	6,594	721
25,000		73,482	12,239	22,005		0	49,013	0	24,469	722
13,906	6,505	35,158	3,465	9,761	2,473		15,699	2,175	17,284	723
0	8,499	23,269	0	10,470	3,499	0	13,969	0	9,300	724
	3,387	15,215	579	7,410	3,118		11,107		4,108	725
	5,106	20,347	358	13,657	1,786		15,801		4,546	726
0	25,484	68,344	7,322	26,099	8,101	0	41,522	500	26,322	727
	5,448	32,723	281	17,454	7,162		24,897		7,826	728
18,400	1,492	29,420	18,370	7,500	2,059		27,929		1,491	729
2,000	448	25,929	6,780	13,095	3,005	0	22,880	2,000	1,049	730
12,000	6,612	51,172	21,776	15,270	5,381		b41,409		9,763	731
0	3,726	14,286	813	7,125	1,740	0	9,678	0	4,608	732
	27,606	90,376	505	46,482	14,389		61,376		29,000	733
	9,295	48,037	3,065	24,037	7,731	0	34,743	1,000	12,294	734
0	4,830	28,828	568	15,809	6,518	0	22,895	0	5,933	735
0	3,402	12,256	600	5,380	1,759	0	7,739	0	4,517	736
	12,108	30,860		12,249			21,222		7,638	737
0	3,000	15,997	4,314	7,754	2,177		14,245		1,752	738
	102,701	582,461	(c)	333,722	d34,179	7,691			100,120	739
0	9,302	22,540	440	7,819	2,932	0	11,191	2,000	9,348	740
	2,745	9,886		7,000	600		7,600		2,286	741
	18,384	73,334	15,203	31,027	12,143	135	58,508		14,826	742
0	1,531	11,435	557	8,215	1,803		10,648		787	743
0	8,564	63,461	3,535	31,551	9,027	0	44,116	0	19,348	744
	21,153	61,574							30,406	745

c Under control of board of public works.
d Does not include repairs made by board of public works.

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TABLE 4.—*Statistics of property, receipts and expenditures of public*

	City.	Total taxable property in the city.		Estimated value of all public property used for school purposes.	Receipts for the school year 1889-90.				
		Assessed value.	Cash value based on the assessment.		From State apportionment or taxes.	From city apportionment or taxes.	From county and other taxes.	From all other sources.	Total.
	1	2	3	4	5	6	7	8	9
	WISCONSIN—continued.								
746	Stevens Point	.....	.....	$52,000	$345	$15,016	$3,629	.....	$18,990
747	Waukesha	$2,908,032	$4,846,720	53,550	1,639	21,998	1,541	$755	25,933
748	Wausau	1,697,186	2,611,056	60,000	4,018	18,043	395	154	22,610
749	White Water*	2,126,000	2,126,000	32,000	1,647	7,000	1,900	78	10,625
	WYOMING.								
750	Cheyenne	4,124,412	.....	100,000	0	17,091	10,240	4,704	32,035

*Statistics of 1888-89.

TABLE 5—*List of cities and villages containing over 4,000*

City or village.	Population.	City or village.	Population.
Alabama:		Illinois:	
Anniston	9,998	Alton	10,294
Bessemer	4,544	Austin	4,051
Florence	6,012	Charleston	4,135
Arizona:		Dixon	5,161
Tucson	5,150	Duquoin	4,052
Arkansas:		Kewanee	4,569
Hot Springs	8,086	Macomb	4,052
Pine Bluff	9,952	Mattoon	6,833
California:		Oak Park	4,771
Alameda	11,165	Pana	5,077
Berkeley	5,101	Indiana:	
Fresno	10,818	Hammond	5,428
Napa City	4,395	Kansas:	
San Bernardino	4,012	Argentine	4,732
Colorado:		Arkansas City	8,347
Highlands	5,161	Kentucky:	
Trinidad	5,523	Frankfort	7,892
Florida:		Maysville	5,358
Jacksonville	17,201	Richmond	5,073
St. Augustine	4,742	Winchester	4,519
Georgia:		Louisiana:	
Albany	4,008	Baton Rouge	10,478
Brunswick	8,459	Maryland:	
Thomasville	5,514	Annapolis	7,604

[1] In the preparation of the summaries on pp. 613-615 the statistics

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schools of cities and villages containing over 4,000 inhabitants—Continued.

Receipts from loans and bonds.	Balance on hand from last school year (1888–89).	Total sum available for use during the year.	Expenditures for the school year 1889–90.					Paid on principal of loans and bonds.	Amount carried forward to next school year (1890–91).	
			Permanent investments and lasting improvements.	Salaries of teachers and supervising officers.	Current and incidental expenses.	Evening schools.	Total.			
10	11	12	13	14	15	16	17	18	19	
----------	$8,891	$24,881	$1,496	$11,996	$2,043	----------	$15,535	$1,350	$7,996	746
0	1,321	27,246	9,385	8,437	4,110	0	21,932	2,500	2,814	747
----------	7,344	29,954	12,662	10,515	3,908	----------	26,865	----------	3,089	748
0	5,461	16,086	2,125	8,300	1,700	----------	12,125	----------	3,961	748
----------	754	32,739	----------	18,736	6,555	----------	25,291	----------	----------	750

inhabitants, concenrning which no school data are at hand.[1]

City or village.	Population.	City or village.	Population.
Maryland—continued:		North Carolina:	
Cambridge	4,192	Concord	4,339
Cumberland	12,729	Henderson	4,191
Missouri:		Wilmington	20,056
Sedalia	14,068	Oklahoma:	
Webb City	5,043	Oklahoma City	4.151
New York:		Oregon:	
College Point	6,127	Albina	5,129
Corning	8,550	Virginia:	
Glens Falls	9,509	Newport News	4,449
Greenbush	7,301	Washington:	
Hempstead	4,831	Fairhaven	4,076
Jamaica	5,361	Olympia	4,698
North Tonawanda	4,793	Port Townsend	4,558
Nyack	4,111	Whatcom	4,059
Oneida	6,083	Wisconsin:	
Oneonta	6,272	Antigo	4,424
Port Richmond	6,290	Ashland	9,955
Saugerties	4,237	Beaver Dam	4,222
Seneca Falls	6,116	Kaukauna	4,667
Suspension Bridge	4,405	Manitowoc	7,710
Tonawanda	7,145	Superior	11,983
Waverly	4,123	Watertown	8,755
West Troy	12,967	Wyoming:	
White Plains	4,042	Laramie	6,388

of these cities were estimated. See foot note on page 613.

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TABLE 1.—*Summary of Statistics*

	Number of schools.	Number of secondary instructors.			Number of secondary students.			Colored secondary students included.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	2	3	4	5	6	7	8	9	10	11
United States	2,526	3,597	5,280	9,120	85,451	116,351	202,963	2,512	3,397	5,933
North Atlantic division	786	1,192	1,817	3,096	35,498	41,879	77,642	476	662	1,144
South Atlantic division	115	158	242	445	3,829	5,414	9,203	145	392	537
South Central division	158	199	269	468	3,807	5,011	8,818	370	501	871
North Central division	1,376	1,924	2,773	4,796	39,401	60,309	100,646	1,463	1,776	3,257
Western division	91	124	179	315	2,916	3,738	6,654	58	66	124
North Atlantic division:										
Maine	88	100	109	224	2,535	3,060	5,595	1	2	3
New Hampshire	39	40	56	96	1,050	1,389	2,439	1	1	2
Vermont	44	46	93	139	1,060	1,422	2,587	6	6	12
Massachusetts	175	263	410	701	8,056	10,909	19,125	35	59	94
Rhode Island	13	30	37	69	721	1,090	1,811	9	8	17
Connecticut	43	64	118	182	1,554	2,381	3,935	27	32	59
New York	201	353	649	1,029	14,245	12,811	27,056	256	392	647
New Jersey	40	64	88	158	1,447	2,502	3,949	36	32	74
Pennsylvania	143	232	257	498	4,830	6,315	11,145	106	130	236
South Atlantic division:										
Delaware	7	10	24	34	228	317	545	0	0	0
Maryland	24	30	33	63	524	617	1,101	0	0	0
District of Columbia	2	22	32	54	905	841	1,746	64	281	345
Virginia	41	42	62	112	846	1,213	2,059	21	55	76
West Virginia	4	3	4	34	247	447	694			
North Carolina	4	3	4	13	160	189	349	0	0	0
South Carolina	8	10	23	33	104	420	524	10	15	25
Georgia	15	21	35	60	564	1,112	1,676	23	26	49
Florida	10	17	25	42	251	258	509	27	15	42
South Central division:										
Kentucky	23	35	38	73	826	685	1,511	3	3	6
Tennessee	15	17	30	47	364	602	966	6	14	20
Alabama	12	14	25	39	160	215	375	61	53	114
Mississippi	11	20	26	46	328	366	694	40	65	105
Louisiana	6	10	21	31	263	574	837	0	0	0
Texas	72	70	92	162	1,494	2,080	3,574	260	366	626
Arkansas	19	33	37	70	372	489	861	0	0	0
North Central division:										
Ohio	291	434	487	928	8,233	12,157	20,390	344	423	767
Indiana	109	183	208	412	3,205	5,194	8,399	164	209	373
Illinois	199	275	398	699	6,042	10,511	16,553	185	203	388
Michigan	153	199	430	640	5,170	7,287	13,172	67	79	164
Wisconsin	126	149	183	337	3,566	4,931	8,574	11	14	25
Minnesota	77	109	192	304	2,268	3,177	5,445	30	55	85
Iowa	159	194	372	577	4,461	7,109	11,714	87	95	182
Missouri	70	133	153	291	2,174	3,597	5,771	324	390	714
North Dakota	5	4	11	18	64	137	201	2	3	5
South Dakota	6	5	12	17	127	221	348	0	2	2
Nebraska	82	112	174	286	1,753	2,543	4,296	38	43	81
Kansas	99	127	153	287	2,338	3,445	5,783	211	260	471
Western division:										
Montana	10	8	15	26	189	258	447	8	10	18
Wyoming	2	1	0	4	47	72	119	0	0	0
Colorado	21	23	26	49	329	539	868	21	12	33
Arizona	3	2	1	3	16	26	42	0	0	0
Utah	1	1	0	1	15	20	35	0	0	0
Nevada	4	4	6	10	70	154	224	1	3	4
Idaho	2	2	4	6	33	51	84			
Washington	6	7	9	16	136	184	320	0	0	0
Oregon	5	8	15	23	236	370	606	0	1	1
California	37	68	103	177	1,845	2,064	3,909	28	40	68

NOTE.—The figures in the "total" columns do not always represent the addition of the "male" alone, and the separation into sex could not be made, hence in the "total" columns there may

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of Public High Schools, 1889–90.

Number preparing for college. Classical course.			Number preparing for college. Scientific course.			Number of students who graduated or completed their studies in 1889–90.			Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.				
12	13	14	15	16	17	18	19	20	21	22	23	24
7,984	6,915	14,909	6,946	7,374	14,320	7,692	14,190	21,882	956,832	$49,171,542	$4,354,092	$404,973
4,163	2,406	6,641	2,575	1,828	4,403	3,275	5,466	8,741	417,165	17,258,712	1,253,478	148,893
508	512	1,020	164	139	303	337	637	974	18,558	1,605,545	303,200	24,247
393	457	850	316	285	601	265	552	817	28,027	1,986,595	414,169	53,148
2,636	3,270	5,906	3,479	4,637	8,116	3,476	7,108	10,584	468,442	25,027,008	1,976,284	170,093
284	268	552	412	455	897	339	427	766	24,640	2,093,682	406,961	8,592
346	214	560	198	150	348	224	354	578	13,184	528,511	39,657	4,303
114	86	200	100	30	130	126	199	325	5,500	667,470	5,241	3,695
159	134	291	85	89	174	88	140	228	11,064	444,395	60,736	9,853
1,560	922	2,482	626	161	787	1,037	1,753	2,790	56,517	4,853,197	172,749	14,812
65	51	116	14	2	16	81	109	190	5,040	417,610	11,124	6,860
354	132	486	225	71	296	207	277	484	19,953	1,237,707	187,110	12,089
995	593	1,588	979	979	1,958	845	1,217	2,062	232,431	4,986,720	494,433	74,655
112	44	228	1 7	172	289	178	370	548	12,282	746,414	77,751	4,317
460	230	690	231	174	405	489	1,047	1,536	61,194	3,376,688	204,677	18,309
7	8	15	11	16	27	14	29	43	330	131,720	25,027	262
122	152	274	48	46	94	40	59	99	987	116,970	21,248	2,046
12	15	27	6	0	6	134	222	356	6,750	333,500	175,140	7,429
178	98	276	32	18	50	52	110	162	1,541	499,240		
						18	60	78	450	82,500	16,328	110
37	31	68	8	0	8	14	23	37	3,900	34,500	13,281	1,141
13	17	30	3	2	5	7	34	41	450	34,575	8,926	2,459
67	135	202	48	41	89	33	72	105	2,250	296,800	28,930	8,120
72	56	128	8	16	24	25	28	53	1,900	76,740	14,320	2,680
37	15	52	26	29	55	69	81	150	9,321	315,670	73,849	4,070
21	21	42	64	47	111	35	73	108	2,230	151,400	11,557	4,447
38	45	83	22	5	27	9	50	59	2,252	135,050	23,659	4,083
19	48	67	27	40	67	17	20	37	673	129,375	31,205	2,340
4	7	11	3	5	8	20	98	118	1,060	57,770	2,060	
189	241	430	144	128	272	92	189	281	9,694	994,255	256,194	31,855
85	80	165	30	31	61	23	41	64	2,797	203,075	15,645	6,353
517	374	891	694	811	1,505	744	1,529	2,273	77,220	5,141,189	367,502	33,993
231	325	556	61	74	135	292	576	868	60,976	2,246,992	203,902	9,502
275	374	649	388	672	1,060	501	1,243	1,744	52,548	3,294,887	192,214	29,811
335	252	587	574	656	1,230	408	660	1,068	103,614	3,021,878	382,158	25,416
146	248	394	339	427	766	310	507	817	44,536	1,843,852	106,185	18,152
160	171	331	449	630	1,079	199	338	537	40,868	2,167,165	97,782	3,891
308	473	781	333	370	703	478	1,094	1,572	37,503	2,458,392	130,370	24,734
187	455	642	230	348	578	183	498	681	21,668	1,008,335	121,382	8,906
2	0	2	1	5	6	1	6	7	765	129,690	23,389	250
20	23	43	9	7	16	3	13	16	910	143,050	9,500	860
212	241	453	168	290	458	180	303	483	11,452	1,937,333	119,098	5,796
243	334	577	243	347	590	182	341	521	16,382	1,533,795	122,802	8,692
												565
20	16	36	12	13	25	14	11	25	1,785	180,600	18,360	
16	26	42				0	2	2	50	25,560	5,881	1,065
19	29	48	55	66	121	15	23	38	4,809	546,700	51,073	0
1	1	2	1	0	1	2	2	4	400	55,475	7,500	
0	0	0	0	0	0	0	0	0	350	85,300		124
0	0	0	4	3	7	10	31	41	1,080	75,592	20,926	275
0	0	0				3	6	9	1,157	112,430		
35	47	82	9	6	15	1	7	8	841	276,050		1,589
8	12	20	4	3	7	10	37	47	800	232,750	153,623	5,024
185	137	322	327	394	721	284	308	592	13,368	1,103,225	149,598	

and "female" columns, as in many instances the school officials reported the total number be figures that do not appear in the other parts.

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TABLE 2.—*Summary of Number of Students*

	Latin.			Greek.			French.			German.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13
United States	28,778	41,633	70,411	4,108	2,094	6,202	4,080	7,778	11,858	8,698	12,640	21,338
North Atlantic Division	11,782	15,061	26,843	2,872	1,411	4,283	3,457	5,413	8,870	3,157	4,476	7,633
South Atlantic Division	2,000	3,218	5,218	212	37	249	93	759	852	649	918	1,567
South Central Division	1,149	1,733	2,882	187	104	291	98	240	338	502	335	837
North Central Division	12,993	20,628	33,621	755	498	1,253	411	1,251	1,662	4,272	6,671	10,943
Western Division	854	993	1,847	82	44	126	21	115	136	118	240	358
North Atlantic Division:												
Maine	317	1,143	1,960	258	128	386	153	426	579	12	17	29
New Hampshire	471	680	1,151	78	87	165	161	245	406	15	22	37
Vermont	420	517	937	125	59	184	64	131	195	24	27	51
Massachusetts	3,799	5,343	9,142	1,064	741	1,796	2,275	3,423	5,703	434	923	1,357
Rhode Island	381	501	882	114	67	181	101	178	279	15	32	47
Connecticut	813	1,029	1,842	280	66	346	143	310	453	315	430	745
New York	2,541	3,081	5,622	539	196	735	383	603	986	1,220	1,459	2,773
New Jersey	400	660	1,060	70	17	87	4	36	40	246	473	919
Pennsylvania	2,140	2,107	4,247	354	50	404	173	56	229	807	1,063	1,870
South Atlantic Division:												
Delaware	156	130	286									
Maryland	241	321	562	33	18	51	26	27	53	26	36	62
District of Columbia	284	622	1,006							261	377	638
Virginia	513	852	1,365	11	0	11	34	146	180	133	252	385
West Virginia	15	28	43							211	231	442
North Carolina	43	64	107	4	0	4	0	3	3			
South Carolina	79	110	189	2	1	3	7	130	137	1	0	1
Georgia	417	934	1,351	101	7	108	14	422	436	12	20	32
Florida	152	157	309	61	11	72	12	31	43	5	2	7
South Central Division:												
Kentucky	514	354	868	69	0	69	9	4	13	319	37	356
Tennessee	111	258	369				1	1	2	13	38	51
Alabama	86	110	196	4	0	4	0	9	9	10	15	25
Mississippi	80	101	181	1	0	1	2	0	2			
Louisiana	243	334	577				0	127	127			
Texas	509	731	1,240	113	104	217	86	99	185	150	216	366
Arkansas	116	199	315							10	29	39
North Central Division:												
Ohio	3,506	5,124	8,630	266	133	399	49	204	253	1,139	1,635	2,774
Indiana	1,489	2,106	3,595	11	9	20	3	15	18	295	472	767
Illinois	2,091	3,806	5,897	159	126	285	131	326	457	683	1,365	2,048
Michigan	1,046	1,525	2,571	90	72	162	70	221	291	497	819	1,316
Wisconsin	654	1,017	1,671	33	25	58	19	28	47	454	619	1,073
Minnesota	1,032	1,443	2,475	79	49	128	31	177	208	294	473	767
Iowa	1,018	1,800	2,818	7	6	13	36	102	138	364	516	880
Missouri	855	1,777	2,632	62	45	107	10	159	169	119	205	324
North Dakota	29	68	97							6	10	16
South Dakota	30	58	88							1	11	12
Nebraska	482	752	1,234	22	19	41	4	4	8	176	225	401
Kansas	761	1,152	1,913	26	14	40	8	15	23	254	321	575
Western Division:												
Montana	29	45	74							5	14	19
Wyoming	15	29	44									
Colorado	61	106	167							11	26	37
Arizona	5	5	10									
Utah												
Nevada												
Idaho												
Washington	23	25	48							22	32	54
Oregon	27	48	75							14	60	74
California	694	735	1 429	82	44	126	21	115	136	66	108	174

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pursuing Certain Studies—Public High Schools, 1889–90.

Algebra.			Geometry.			Physics.			Chemistry.			General history.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
38,684	53,466	92,150	18,539	24,755	43,294	19,231	26,953	46,184	8,437	12,066	20,503	22,048	33,379	55,427
13,737	17,619	31,356	7,406	7,789	15,195	7,112	8,899	16,011	3,691	4,612	8,303	8,358	12,449	20,807
2,240	3,404	5,644	1,069	1,569	2,638	1,170	1,842	3,012	372	412	784	1,452	2,263	3,715
2,354	3,146	5,500	894	1,377	2,271	1,241	1,732	2,973	335	550	885	1,371	2,236	3,607
18,622	27,137	45,759	8,125	12,818	20,943	8,964	13,545	22,509	3,508	5,984	9,492	9,638	14,226	24,614
1,731	2,160	3,891	1,045	1,202	2,247	744	935	1,679	531	508	1,039	1,179	1,505	2,684
1,054	1,276	2,330	531	627	1,158	527	659	1,186	255	376	631	653	821	1,474
435	550	985	249	359	608	281	337	618	156	167	325	215	328	543
463	576	1,039	204	274	478	213	229	442	106	147	253	224	279	503
3,492	4,306	7,798	2,127	636	2,763	2,092	2,606	4,698	1,314	1,795	3,109	3,022	4,445	7,467
398	423	821	183	281	464	185	218	403	74	109	183	197	423	620
733	999	1,732	450	586	1,036	353	501	854	171	245	416	455	603	1,058
3,382	4,174	7,556	1,739	2,267	4,006	1,364	1,659	3,023	710	826	1,536	1,168	2,165	3,333
774	1,468	2,242	304	712	1,016	356	670	1,026	156	296	452	485	996	1,481
3,000	3,847	6,853	1,619	2,047	3,666	1,741	2,020	3,761	747	651	1,398	1,939	2,389	4,328
105	128	233	59	72	131	81	107	188	23	5	28	32	27	59
333	412	745	219	296	515	220	268	488	5	4	9	245	204	449
288	520	808	155	282	440	115	234	349	100	100	200	53	254	307
596	694	1,290	229	298	527	236	319	555	78	92	170	633	817	1,450
197	268	465	122	147	269	119	144	263	89	107	196	37	80	117
56	89	145	19	25	44	21	26	47				70	109	179
59	268	327	15	135	150	35	282	317	1	4	5	47	307	354
481	904	1,385	190	225	415	282	361	643	45	74	119	208	336	544
125	121	246	58	89	147	71	91	162	31	26	57	127	129	256
437	342	779	89	163	252	226	183	406	41	9	50	225	286	511
243	318	561	84	141	225	66	117	183	23	38	61	117	215	332
92	112	204	35	62	97	37	59	96	12	43	55	66	98	164
132	185	317	13	32	45	60	101	161	16	15	31	52	111	163
14	282	296	7	116	123	8	171	179	4	93	97	30	282	312
1,211	1,575	2,786	589	726	1,315	754	942	1,696	231	337	568	722	1,017	1,739
225	332	557	77	137	214	93	159	252	8	15	23	159	227	386
4,772	6,233	11,005	2,019	2,848	4,867	1,801	2,595	4,396	706	1,138	1,844	1,900	2,568	4,468
1,808	2,652	4,460	668	1,034	1,702	797	1,208	2,005	299	633	932	901	1,434	2,335
2,633	4,440	7,073	1,394	2,601	3,995	1,512	2,555	4,067	663	1,303	1,966	1,697	2,964	4,661
1,733	2,705	4,438	655	983	1,638	926	1,317	2,243	435	587	1,022	1,124	1,678	2,802
1,348	1,758	3,106	742	939	1,681	631	895	1,526	148	193	341	621	820	1,441
868	1,370	2,238	491	679	1,170	553	622	1,175	219	266	485	329	568	897
1,926	2,322	4,248	862	1,520	2,382	1,039	1,665	2,698	348	573	921	1,282	1,889	3,171
1,429	2,598	4,027	420	827	1,247	524	1,041	1,575	317	715	1,032	566	1,092	1,678
78	92	170	8	14	22	15	18	33	14	20	34	20	39	59
54	82	136	29	50	79	30	52	82	7	11	18	32	66	98
820	1,216	2,036	346	577	923	473	671	1,144	195	309	504	466	696	1,162
1,153	1,669	2,822	491	746	1,237	659	906	1,565	157	236	393	730	1,112	1,842
86	112	198	32	43	75	30	43	73	12	14	26	33	66	99
28	40	68	7	18	25	7	18	25	4	2	6	9	15	24
135	213	348	51	93	144	82	140	222	16	29	45	120	207	327
7	7	14	3	3	6	11	6	17				11	6	17
4	4	8				8	8	16				15	20	35
50	100	150	14	21	35	39	58	97	14	33	47	38	28	66
26	43	69	26	36	62	29	39	68	21	35	56	26	45	71
87	120	207	22	31	53	31	41	72	6	9	15	22	28	50
124	173	297	41	71	112	32	46	78	29	38	67	170	221	391
1,184	1,348	2,532	849	886	1,735	475	536	1,011	429	348	777	735	869	1,604

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Percentage of male and female students in public secondary schools pursuing certain studies—1889–90.

	Latin.		Greek.		French.		German.		Algebra.		Geometry.		Physics.		Chemistry.		General history.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
North Atlantic Division	43.89	56.11	67.06	32.94	38.97	61.03	41.36	58.64	43.81	56.19	48.74	51.26	44.42	55.58	44.45	55.55	40.17	59.83
South Atlantic Division	38.33	61.67	85.14	14.86	10.92	89.08	41.41	58.59	39.69	60.31	40.52	59.48	38.84	61.16	47.45	52.55	39.09	60.91
South Central Division	39.52	60.48	64.26	35.74	29.00	71.00	59.98	40.02	42.80	57.20	39.37	60.63	41.74	58.26	37.85	62.15	38.01	61.99
North Central Division	38.65	61.35	39.74	60.26	24.73	75.27	39.04	60.96	40.71	59.29	38.79	61.21	39.82	60.18	36.95	63.05	39.24	60.76
Western Division	46.23	53.77	65.08	34.92	15.44	84.56	32.96	67.04	44.49	55.51	46.50	53.49	44.31	55.69	51.11	48.89	43.93	56.07
United States	40.87	59.13	66.23	33.77	65.59	34.41	40.76	59.24	41.99	58.01	42.83	57.17	58.36	41.64	41.15	58.85	39.77	60.23

Percentage of students in each branch of study to the whole number of students.—Public secondary schools, 1889–90.

Branch of study, etc.	Number of students.	Per cent of total number.
Latin	70,411	34.69
Greek	6,202	3.05
French	11,858	5.84
German	21,333	10.51
Algebra	92,150	45.39
Geometry	43,294	21.33
Physics	46,184	22.21
Chemistry	20,503	10.10
General history	56,427	27.31
Number of schools		2,526
Number of instructors		*9,120
Number of students		†202,963

*Number to each school, 3.61.
†Number to each teacher, 22.25; to each school, 80.35.

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	ALABAMA.				
1	Alexander City	High School	C. C. Slaton	2	2
2	Auburn	do	Miss Annie W. Brockman	0	6
3	Birmingham	do	W. K. Brown	3	2
4	Chance	Bethel High School	C. C. Johnston, reporting officer.	----	----
5	Decatur	High School (department)	H. C. Gilbert	2	0
6	Eufaula	High School	J. J. Kilpatrick	1	0
7	Gaylesville	High School	S. L. Russell, reporting officer.	----	----
8	Greensboro	Tullibody Academy	H. Johnson	2	1
9	Marion	Marion Academy	H. Y. Weissinger	1	3
10	Mobile	Girls' High School	E. R. Dickson, superintendent.	1	4
11	New Decatur	High School (department)	Henry D. Wood	2	5
12	Uniontown	Uniontown Academy	J. H. Armstrong	1	2
	ARIZONA.				
13	Mineral Park	High School	Miss Alice D. Campbell	0	1
14	Prescott	do	D. A. Lambright	1	0
15	Tucson	do	W. C. Bowman	1	----
	ARKANSAS.				
16	Belleville	Belleville Academy	J. G. Smyth	4	0
17	Eureka Springs	High School	C. S. Barnett	1	0
18	Fort Smith	do	D. P. Nicholson	2	2
19	Harrisburg	do	R. L. Cowan	2	2
20	Hazen	do	Thos. H. Wheat	2	2
21	Helena	Jefferson High School	J. Caldwell Davidson	1	0
22	Huntsville	High School	Jesse Bird	1	2
23	La Grange	Lee High School	J. E. Wheat	1	1
24	Little Rock	Scott High School	R. H. Tarham	1	2
25	Lonoke	High School	J. J. Doyne	2	5
26	Malvern	High School (department)	W. D. Leiper	1	0
27	Marianna	Male and Female Institute	T. A. Futrall	2	2
28	Newport	High School (department)	D. F. Withers	2	2
29	Ozark	College or High School	G. D. Turney	2	1
30	Paris	Paris Academy	J. W. Parker	3	2
31	Salem	High School	C. T. Torryson	1	1
32	Springdale	do	Geo. A. Cole	2	2
33	Van Buren	do	T. S. Cox	2	7
34	Warren	do	E. H. Carson, A. M., M. D.	1	4
	CALIFORNIA.				
35	Arroyo Grande	Grammar School (course school).	A. F. Parsons	1	3
36	Berkeley	High School	Henry Veghte	1	2
37	Colton	Grammar School (course school).	Frank Matthews	1	6
38	Colusa	do	Jno. L. Hayman	3	0
39	Fresno	High School	T. L. Heaton, superintendent.	1	2
40	Gilroy	do	W. S. Hall	1	1
41	Grass Valley	do	Granville F. Foster, M.A.	2	1
42	Hollister	do	James W. Cutler	2	6
43	Linden	Grammar School (course school).	F. G. Baird	1	2
44	Lodi	Salem Grammar School (course school).	C. C. Adams	1	4
45	Los Angeles	High School	Miss E. A. Packard	1	9
46	Martinez	do	Miss C. K. Wittenmyer	0	2
47	Marysville	do	Mrs. Emma Hapgood	1	3

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High Schools for 1889–90.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
21	20															1
2	17	0	0	7	10	1	1	0	3	No..	No..	1	$1,000	$800	$800	2
21	75	0	0	3	0	15	0	2	4	No..	No..	2,000	200	.....	1,520	3
5	4	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	.....	.....	4
11	25	.....	.....	.....	.....	.....	.....	1	4	Yes.	No..	.....	9,300	4,150	112	5
15	10	.....	.....	.....	.....	.....	.....	0	0	Yes.	No..	0	13,000	2,000	50	6
13	2	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	.....	.....	7
15	10	15	10	.....	.....	.....	.....	0	0	.....	No..	0	1,500	.....	.....	8
11	9	0	0	10	8	1	1	6	6	Yes.	No..	50	2,500	0	0	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	29	Yes.	No..	200	78,000	8,000	0	10
31	23	31	23	8	15	5	3	0	0	Yes.	No..	1	25,050	7,500	200	11
15	20	15	20	10	12	.....	.....	0	4	Yes.	No..	0	4,500	1,206	1,400	12
2	6	0	0	0	0	.....	.....	0	0	No..	No..	50	125	500	0	13
11	7	.....	.....	1	1	1	0	2	2	Yes.	No..	200	10,300	7,000	0	14
3	13	.....	.....	.....	.....	.....	.....	0	0	Yes.	No..	150	45,050	.....	.....	15
30	24	0	0	12	5	0	0	1	0	Yes.	No..	500	5,000	400	1,200	16
7	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17
30	63	0	0	2	10	2	10	2	4	No..	No..	100	40,300	.....	75	18
10	12	0	0	0	0	2	0	.....	.....	No..	No..	0	1,025	0	2,105	19
45	50	.....	.....	20	25	8	0	.....	.....	No..	No..	0	1,500	1,350	700	20
11	17	0	0	2	19	4	0	4	3	Yes.	Yes.	200	30,150	.....	100	21
28	26	0	0	4	6	1	0	0	0	No..	No..	75	3,500	0	425	22
15	14	0	0	4	0	.....	.....	0	0	No..	No..	0	1,200	1,200	200	23
35	82	0	0	.....	.....	.....	.....	3	10	Yes.	No..	200	75,200	.....	.....	24
16	11	0	0	2	3	0	0	6	3	No..	No..	30	6,000	3,800	90	25
2	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26
20	30	0	0	5	0	0	0	1	1	No..	No..	1,500	6,000	2,500	.....	27
13	20	0	0	2	2	.....	.....	3	4	No..	No..	0	5,000	1,450	175	28
24	19	.....	.....	1	1	.....	.....	0	0	No..	No..	0	9,000	.....	.....	29
30	28	0	0	3	3	0	0	0	0	No..	No..	42	1,600	1,500	.....	30
15	8	0	0	3	0	.....	.....	0	0	No..	No..	0	500	385	337	31
18	19	0	0	7	4	11	15	0	0	No..	No..	0	4,000	1,100	200	32
6	10	.....	.....	6	3	.....	.....	3	14	No..	No..	100	10,100	1,400	16	33
17	24	0	0	13	4	2	6	0	2	No..	No..	50	3,000	500	240	34
26	21	0	0	0	0	4	4	0	0	Yes.	No..	350	10,050	2,700	.....	35
40	50	0	0	0	6	.....	.....	7	8	No..	No..	200	180	.....	150	36
5	7	0	0	4	2	0	0	1	3	Yes.	No..	200	25,000	5,770	.....	37
18	20	0	0	.....	.....	.....	.....	9	9	No..	No..	1,000	10,100	3,060	.....	38
39	50	0	0	.....	.....	14	7	0	0	No..	No..	217	3,500	4,000	270	39
16	31	0	0	0	0	0	0	5	6	No..	No..	450	13,150	8,009	468	40
31	60	0	0	.....	.....	.....	.....	10	22	Yes.	.....	240	5,300	.....	490	41
6	11	6	8	0	0	6	11	0	2	Yes.	No..	300	6,200	15,000	.....	42
6	2	0	0	0	0	.....	.....	2	1	Yes.	No..	350	4,600	2,400	.....	43
2	7	.....	.....	0	0	0	0	.....	.....	Yes.	No..	300	10,100	4,000	.....	44
122	133	1	0	6	2	116	131	12	10	Yes	No..	350	32,500	.....	275	45
15	17	0	0	2	0	2	3	0	0	No..	No..	600	.....	.....	.....	46
69	103	1	2	0	0	0	0	5	6	Yes.	Yes.	1,000	20,500	.....	100	47

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	CALIFORNIA—cont'd.				
48	Napa	High School	J. L. Shearer	1	1
49	Nevada City	do	W. H. Wentworth	3	1
50	Nipomo	High School (department)	J. N. Selby	1	2
51	Oakland	High School	J. B. McChesney	4	11
52	Pasadena	do	W. S. Monroe	1	4
53	Paso Robles	do	S. B. Wilson	1	3
54	Petaluma	do	I. S. Crawford	1	1
55	Pomona	do	F. A. Molyneaux	1	2
56	Riverside	do	C. H. Keyes	1	5
57	Sacramento	do	J. H. Pond	2	4
58	Salinas	do	A. D. Tenney	1	1
59	San Bernardino	do	Noble A. Richardson	1	3
60	San Diego	do		(4)	
61	San Francisco	High School (boys)	Frank Morton	10	2
62	do	Cogswell Mission High School.	Jas. G. Kennedy	9	4
63	do	Commercial High School	W. N. Bush	4	9
64	San Jose	High School	L. B. Wilson	2	3
65	San Rafael	do	C. S. Smyth	3	1
66	Santa Ana	do		(2)	
67	Santa Clara	do	John Manzer	1	1
68	Santa Rosa	do	H. C. Petray	2	1
69	Stockton	do	S. D. Waterman	2	1
70	Tulare	High School (department)	H. Clay Faber	1	2
71	Ventura	High School	Samuel T. Black	2	0
	COLORADO.				
72	Aspen	High School	W. T. Eddingfield	1	1
73	Black Hawk	High School (department)	H. W. Zirkle	1	0
74	Boulder	High School	C. M. Kingsley	1	1
75	Buena Vista	High School (department)	Mrs. R. G. Leake	0	1
76	Canyon City	High School	O. S. Moles	1	1
77	Colorado City	High School (department)	J. P. Jackson	1	1
78	Colorado Springs	High School	G. B. Turnbull	2	2
79	Denver	High School (north side)	C. F. Hays	3	2
80	Fort Collins	High School	E. L. Byington, superintendent.	1	1
81	Golden	do	W. Triplet	2	0
82	Grand Junction	do	J. A. Guttery	1	1
83	Greeley	do	W. C. Thomas	1	2
84	Longmont	do	G. L. Harding	1	1
85	Loveland	High School (department)	C. L. Smith	1	5
86	Maucos	High School	A. J. Floyd	1	0
87	Ouray	do	G. H. Thrailkill	1	2
88	Pueblo	High School district No. 1		(3)	
89	do	High School, district No. 20		(4)	
90	Saguache	High School	Jacob H. Freeman	1	3
91	Trinidad	do	J. M. Butler, superintendent.	2	1
92	Yuma	do	Ed. S. Klein	1	0
	CONNECTICUT.				
93	Ansonia	High School		1	4
94	Bethel	do	E. M. Crowfoot	1	1
95	Branford	do	Henry S. Gulliver	1	1
96	Bridgeport	do	Charles H. Peck	1	7
97	Bristol	do	George H. Tracey	1	3
98	Brooklyn	do	H. N Loomis	1	0
99	Canaan	do	H. W. Adams	0	2
100	Clinton	do	Dwight Holbrook	3	3
101	Collinsville	do	G. W. Flint	1	6
102	Cromwell	do	Miss S. M. Savage	0	2

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
12	45	4	5	0	0	0	0	0	11	Yes.	No..	650	$40,150	$13,500	$150	48
26	47	0	1	4	0	6	0	5	7	Yes.	Yes.	500	250	.....	100	49
24	14	0	0	4	3	20	11	0	0	Yes.	Yes.	250	5,150	2,500	.....	50
274	335	0	2	10	3	16	4	33	37	No..	No..	50	40,750	0	1,400	51
40	53	0	0	.....	.....	3	5	2	4	Yes.	No..	176	30,200	.....	.....	52
14	16	7	10	0	0	2	2	0	1	No..	No..	175	7,575	4,632	81	53
23	30	0	0	4	0	2	4	6	4	No..	No..	40	9,200	3,500	296	54
10	20	3	7	0	0	10	20	0	0	Yes.	No..	350	35,100	19,439	.....	55
56	58	0	0	3	6	9	5	3	3	Yes.	No..	300	115,600	.....	.....	56
63	148	1	1	3	7	.....	.....	.....	.....	No..	No..	254	13,000	.....	.....	57
24	24	0	0	.....	.....	.....	.....	1	1	Yes.	No..	883	10,005	2,568	534	58
46	55	0	2	.....	.....	.....	.....	3	5	Yes.	No..	250	105,300	18,783	.....	59
46	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
323	124	0	0	100	30	.....	.....	58	17	Yes.	No..	823	31,000	.....	.....	61
145	154	2	1	18	22	127	132	1	0	Yes.	No..	675	150,000	.....	.....	62
58	47	0	0	0	0	58	47	85	91	Yes.	No..	0	10,000	.....	.....	63
84	102	1	0	.....	.....	.....	.....	8	13	Yes.	No..	680	51,000	20,000	400	64
21	20	0	0	0	0	4	4	.....	.....	Yes.	.....	600	20,350	.....	.....	65
35	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
10	21	0	0	1	1	2	3	4	8	No..	No..	425	16,300	2,000	100	67
33	40	.....	.....	12	38	21	0	8	8	Yes.	No..	0	15,300	7,000	200	68
49	79	0	0	10	18	.....	.....	11	28	Yes.	No..	600	40,500	.....	.....	69
19	17	2	1	3	2	0	0	4	2	Yes.	No..	100	35,025	9,246	.....	70
15	15	0	0	0	3	13	1	0	1	No..	No..	30	30,300	1,500	100	71
10	19	2	3	.....	.....	.....	.....	0	0	Yes.	No..	300	50,150	1,000	0	72
3	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	73
18	16	10	0	3	5	2	1	0	0	No..	No..	800	61,200	18,000	200	74
5	9	0	0	0	0	.....	.....	0	2	Yes.	No..	400	.....	.....	.....	75
15	28	0	0	0	0	15	28	2	6	Yes.	No..	150	30,100	1,800	300	76
5	6	0	1	0	0	0	0	4	4	No..	No..	215	32,000	8,000	.....	77
38	40	0	0	4	5	34	35	1	3	Yes.	No..	.....	32,000	.....	0	78
22	45	0	0	0	0	0	0	0	0	Yes.	.....	150	125,100	.....	100	79
11	31	2	3	.....	.....	.....	.....	0	0	Yes.	No..	800	40,500	.....	.....	80
19	38	0	0	0	0	0	0	0	0	No..	No..	700	22,650	173	.....	81
5	10	0	0	2	0	.....	.....	0	0	Yes.	No..	177	.....	.....	.....	82
23	46	0	0	1	2	0	0	3	3	No..	No..	300	25,300	.....	190	83
21	56	0	0	2	2	.....	.....	2	1	Yes.	No..	69	20,400	6,000	175	84
5	17	0	0	3	9	0	0	3	2	No..	No..	100	20,200	900	100	85
20	22	.....	.....	.....	.....	.....	.....	.....	.....	No..	No..	98	5,000	.....	.....	86
23	17	0	0	0	3	3	0	0	0	Yes.	No..	200	10,075	200	.....	87
25	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	88
30	37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	89
6	13	0	0	.....	.....	.....	.....	0	0	No..	No..	150	8,000	.....	.....	90
20	32	7	5	4	2	1	2	0	0	No..	No..	200	58,400	20,000	0	91
4	5	0	0	.....	.....	.....	.....	0	2	No..	No..	.....	5,625	.....	.....	92
25	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,500	.....	.....	.....	93
10	10	0	0	0	0	0	0	3	3	No.	No.	16	8,050	.....	.....	94
16	24	.....	.....	.....	.....	.....	.....	3	5	Yes	No.	600	12,200	1,800	.....	95
107	192	1	0	47	2	8	.....	9	33	Yes	No.	300	100,500	92,566	1,000	96
52	49	0	0	6	4	2	0	8	9	No.	No.	300	.....	3,867	0	97
17	12	.....	.....	.....	.....	.....	.....	3	0	Yes	No.	125	.....	.....	.....	98
16	18	0	2	0	0	.....	.....	3	7	No.	No.	43	7,018	.....	60	99
30	27	0	0	4	0	5	0	3	7	Yes	No.	2,200	75,300	0	500	100
21	26	.....	.....	.....	.....	.....	.....	2	1	No.	No.	300	5,010	20	441	101
11	11	0	1	1	0	.....	.....	.....	.....	No.	No.	60	25	.....	.....	102

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	CONNECTICUT—con'd.				
103	Danielsonville	Killingly High School	A. P. Somes	1	2
104	East Hartford	High School	John Haynes	1	0
105	Enfield	....do	Wm. E. Atwater	1	0
106	Gildersleeve	....do	Geo. N. Goddard	1	2
107	Guilford	Guilford Institute and High School.	Arthur M. Hyde	1	1
108	Hartford	High School	Joseph Hall	12	10
109	Hazardville	....do	Elmer E. Randall	1	4
110	Litchfield	Center High School	Robt. L. Zink	1	4
111	Madison	Hand Academy High School.	Miss A. C. Elliott	0	1
112	Manchester	High School, eighth district.	C. S. Lyman	1	0
113	Meriden	High School	S. M. Frost, A. M.	2	5
114	Middletown	....do	W. B. Ferguson	3	4
115	Milford	....do	H. I. Mathewson	1	0
116	New Britain	....do	John H. Peck	2	4
117	New Haven	Hillhouse High School	James D. Whitmore	8	14
118	New London	Young Ladies' High School	Miss Marion A. Greene	0	2
119	New Milford	Center School	F. N. Hanchett	1	2
120	Norwalk	....do	Chas. A. Tucker	1	7
121	Orange	High School	Miss M. E. Paine	0	1
122	Plainville	....do	S. P. Williams	1	1
123	Rockville	....do	Isaac M. Agard, A. M.	2	2
124	Southington	Lewis High School	Horace W. Rice	1	2
125	South Norwark	Union High School	Wm. C. Foote	1	2
126	Stafford Springs	High School	M. M. Elliott	1	2
127	Thomaston	....do	F. A. Verplank	1	0
128	Thompsonville	....do	E. H. Parkman	1	2
129	Wallingford	....do	F. J. Heavens, A. M.	1	2
130	West Hartford	....do	Alfred F. Howes	1	1
131	Wethersfield	....do	J. O. Hurlburt	1	1
132	Willimantic	....do	F. H. Beede	1	3
133	Windham	....do		1	3
134	Windsor	....do	H. E. Sawyer	1	1
135	Winsted	....do	W. G. Mitchell	1	1
	DELAWARE.				
136	Delaware City	Academic Department of Public Schools.	T. E. Gardner	1	0
137	Felton	High School	C. C. Tindal	1	2
138	Lewes	Union High School	Roman Tammany	1	6
139	Milford	North Milford High School	Daniel S. Ells	1	3
140	New Castle	High School	D. B. Jones	1	0
141	Smyrna	....do	A. Duncan Yocum	1	0
142	Wilmington	....do	A. H. Berlin	4	13
	DISTRICT OF COLUMBIA.				
143	Washington	High School	Dr. F. R. Lane	16	26
144	....do	High School, seventh and eighth divisions.	F. L. Cardozo	6	6
	FLORIDA.				
145	Gainesville	East Florida Seminary	Edwin P. Carter	5	1
146	Jacksonville	Duval High School	Frederick Pasco	2	3
147	Kissimmee	Osceola High School	F. J. Smith	1	4
148	Lady Lake	High School (department)	Noble Harter	1	1
149	Monticello	Jefferson Collegiate Institute.	W. B. Griffin	1	6
150	Palatka	Palatka Heights and Palatka High School.	B. L. Mullen and Miss P. T. Chamberlain.	1	0

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
22	33	0	1	0	5	5	0	7	5	No	No	400	$30,300	0	$275	103
7	7	0	0	0	0	----	----	0	0	No	----	----	----	----	----	104
16	21	----	----	----	----	----	----	0	2	No	No	115	----	----	----	105
6	21	0	0	0	0	0	1	1	7	No	Yes	30	12,100	$2,511	0	106
27	28	0	0	0	0	1	0	1	1	No	No	200	5,100	1,250	50	107
344	379	1	2	90	54	60	44	30	35	No	No	2,145	$11,000	24,000	5,000	108
17	13	0	0	----	----	0	0	1	3	No	No	200	12,150	300	60	109
15	15	2	3	6	0	1	0	----	----	No	No	12	15,000	----	----	110
16	19	1	0	0	0	0	0	0	0	No	No	190	15,100	850	----	111
21	25	0	0	0	0	----	----	0	0	Yes	No	270	17,010	----	----	112
112	173	1	1	11	0	5	0	11	20	No	No	1,000	95,992	----	----	113
61	60	0	0	10	6	3	4	5	7	No	No	300	70,300	----	1,270	114
11	18	1	3	0	0	----	----	4	1	No	No	50	18,025	1,500	----	115
65	114	0	0	18	12	8	5	9	11	No	No	550	50,700	6,500	429	116
234	439	5	4	131	20	98	0	64	61	Yes	No	3,000	155,000	35,000	1,600	117
0	94	----	----	----	----	----	----	0	3	No	No	728	4,550	3,145	336	118
17	18	12	13	----	----	----	----	----	----	No	No	500	12,000	661	100	119
12	18	----	----	0	0	----	----	1	5	Yes	No	300	15,075	20	----	120
5	19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	121
16	18	1	0	----	----	0	0	2	7	No	No	75	15,100	900	75	122
42	50	0	0	13	6	----	----	----	----	No	No	300	----	306	----	123
22	47	0	0	0	0	0	0	4	3	No	No	350	8,200	1,481	----	124
20	31	0	0	----	----	3	0	1	5	No	No	50	20	----	195	125
23	19	----	----	----	----	----	----	3	3	No	No	----	21,997	3,500	30	126
13	26	1	0	0	1	----	----	4	3	No	No	100	----	----	----	127
18	45	0	0	2	3	----	----	0	0	No	Yes	250	20,125	1,300	150	128
28	36	0	0	4	7	5	0	2	3	Yes	No	700	60,250	----	187	129
13	15	1	0	1	7	2	5	0	5	No	Yes	200	----	1,803	----	130
35	23	0	1	0	0	10	12	1	5	No	No	100	5,000	1,200	0	131
48	61	0	0	5	5	3	0	5	3	No	No	25	40,300	----	551	132
50	59	----	----	----	----	----	----	----	----	----	----	----	500	----	----	133
9	17	0	0	0	0	0	0	1	2	No	No	169	4,000	1,130	----	134
14	17	0	0	5	0	0	0	1	2	No	No	200	15,000	1,500	----	135
8	5	----	----	2	0	----	----	0	0	Yes	No	----	7,900	567	----	136
14	18	0	0	2	2	5	7	0	0	No	No	0	4,020	500	200	137
38	52	0	0	3	5	6	3	0	3	No	No	0	10,350	750	----	138
12	17	0	0	0	0	0	6	0	0	No	No	0	8,000	800	12	139
14	16	----	----	----	----	----	----	3	5	No	No	0	5,000	800	----	140
10	13	0	0	0	1	----	----	2	2	No	Yes	30	18,150	70	50	141
132	196	0	0	0	0	----	----	9	18	Yes	Yes	300	78,300	21,540	----	142
841	560	0	0	12	15	6	0	120	195	Yes	No	6,000	286,000	----	----	143
64	281	64	281	----	----	----	----	14	27	Yes	No	750	50,500	----	----	144
51	10	0	0	----	----	----	----	7	3	Yes	No	1,000	25,500	2,900	2,200	145
33	65	0	0	5	4	----	----	4	10	No	No	200	3,000	3,100	0	146
21	24	0	0	0	0	0	0	0	0	No	No	0	1,500	1,950	----	147
21	22	0	0	0	0	0	0	0	0	Yes	No	0	1,200	960	----	148
40	30	0	0	40	30	0	0	0	0	No	No	0	5,000	----	----	149
9	12	27	15	0	0	----	----	0	0	No	No	400	6,500	930	0	150

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	FLORIDA—cont'd.				
151	St. Augustine	High School	Walter E. Kinbloe	1	6
152	Tallahassee	Seminary west of the Suwannee River.	Geo. M. Edgar, LL. D	3	2
153	Union	Union Academy	W. S. Cowthon	1	0
154	Waukeenah	Waukeenah Academy	H. P. Woodbery	1	2
	GEORGIA.				
155	Americus	High School, Jackson street.	J. E. Mathis	1	2
156	Athens	High School, Washington street.	Thomas J. Simmons	1	2
157	Atlanta	High School (boys')	W. A. Bass	3	10
158	do	High School (girls')	Miss Nettie C. Sergeant		
159	Augusta	High School	John Neeley	(4)	
160	Cedartown	do	J. C. Harris, superintendent.	2	1
161	Dalton	do	Miss Agnes V. Morris	1	1
162	Hawkinsville	High School (department).	N. E. Ware, superintendent.		
163	Macon	Central High School (boys')	C. B. Chapman	2	1
164	do	Central High School (girls')	Miss Bessie H. Merrill	0	5
165	Newnan	High School (department).	Lyman H. Ford	1	1
166	Sandersville	High School	B. H. Ivey	2	3
167	Savannah	do	H. F. Train	5	2
168	Sparta	Male and Female High School.	W. T. Dumas	1	2
169	West Point	High School (department).	A. P. Mooty	2	5
	IDAHO.				
170	Bellevue	High School (department).	H. F. Baker	1	3
171	Boise City	High School	J. W. Daniels	1	1
	ILLINOIS.				
172	Alton	High School	R. A. Haight, superintendent.	0	3
173	Amboy	do	I. F. Edwards	1	1
174	Annawan	do	W. H. Holzinger	1	3
175	Astoria	do	J. H. Broomall	1	1
176	Athens	do	S. McBride	1	0
177	Atkinson	do	Jesse F. Orton	1	0
178	Augusta	do	Miss C. Grote	1	1
179	Aurora	High School, district No. 5.	Joseph V. Denney	3	4
180	do	High School (west)	K. H. Reynolds	0	2
181	Avon	High School	H. L. Roberts	(1)	
182	Austin	do	Newell D. Gilbert, superintendent.	0	3
183	Barry	do	L. R. Chapin	1	1
184	Batavia	High School (east side)	D. B. Hazen	1	1
185	Beardstown	High School	A. C. Butler	2	1
186	Belleville	do	H. J. Klein	(3)	
187	Belvidere	High School (north)	J. C. Zilnser	1	1
188	Bement	High School	J. M. Martin	3	6
189	Bloomington	do	A. E. Whitten, A. M.	2	4
190	Braidwood	do		(1)	
191	Brimfield	do	A. J. Bookinyer	1	3
192	Bushnell	do	Mack M. Pinckley	1	1
193	Byron	do	G. N. Maxwell	1	0
194	Cairo	do	Miss M. E. Pattison	1	2
195	Camp Point	Maplewood High School	J. W. Creekmur	2	6
196	Canton	Union High School	I. T. Atwater, secretary board of education.	1	1

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
15	27	0	0	0	0	2	3	2	2	No..	No..	200	$10,300	$4,000	.....	151
27	25	0	0	17	15	3	10	0	0	Yes.	No..	160	20,500	0	0	152
4	3	0	0	3	2	1	1	0	0	No..	Yes.	.....	240	180	$30	153
30	40	.....	.....	7	5	3	2	11	12	No..	No..	.....	3,000	300	450	154
25	45	0	0	.....	.....	.....	.....	1	3	Yes.	No..	0	60,000	9,630	359	155
32	27	0	0	.....	.....	.....	.....	3	5	No..	No..	2,100	12,350	.....	.....	156
115	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	157
4	347	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	158
20	130	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	159
23	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	160
18	26	0	0	.....	.....	.....	.....	0	3	No..	No..	50	10,050	.....	391	161
60	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	162
105	0	0	0	60	0	45	0	17	0	No..	No..	100	25,000	.....	.....	163
0	168	.....	.....	0	130	0	38	0	22	No..	No..	0	.....	.....	.....	164
35	38	23	26	0	5	1	3	2	15	Yes.	No..	0	25,100	8,000	2,300	165
20	40	.....	.....	0	0	.....	.....	1	7	No..	No..	0	3,500	.....	300	166
70	126	0	0	0	0	.....	.....	9	16	Yes.	No..	0	150,300	6,751	4,250	167
15	20	0	0	.....	.....	.....	.....	.....	.....	No ..	No..	.....	.....	500	.....	168
26	38	.....	.....	7	0	2	0	0	1	No..	No..	0	12,000	4,000	20	169
12	16	.....	.....	0	0	0	0	3	4	No..	No..	357	12,230	.....	275	170
21	35	.....	.....	0	0	.....	.....	3	5	No..	No..	300	100,200	.....	.....	171
31	76	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	250	4,000	.....	.....	172
26	37	0	0	0	0	0	0	0	10	No..	No..	125	500	.....	90	173
40	16	.....	.....	.....	.....	.....	.....	0	2	Yes.	No..	20	1,250	.....	.....	174
18	37	.....	.....	0	0	0	0	1	4	No..	No..	350	20,060	.....	50	175
18	36	0	0	0	0	4	4	3	7	No..	No..	108	10,300	.....	.....	176
25	20	0	0	0	0	1	0	1	1	No..	No..	12	4,000	1,653	116	177
19	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	178
58	86	1	1	0	1	12	16	3	20	Yes.	No..	900	25,400	.....	100	179
45	57	0	0	0	0	5	5	8	8	Yes.	No..	200	45,300	2,000	300	180
12	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	181
16	48	9	2	6	1	.....	.....	1	2	No..	No..	100	37,700	.....	134	182
15	31	1	4	0	0	0	0	1	10	Yes.	No..	75	15,250	4.008	450	183
9	36	1	2	0	0	0	0	0	0	Yes.	No..	150	10,100	135	45	184
12	17	0	0	.....	.....	.....	.....	0	5	Yes.	No..	96	30,150	1,200	138	185
53	98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	186
17	30	0	0	.....	.....	.....	.....	5	5	No..	No..	225	12,500	.....	326	187
15	34	0	0	.....	.....	.....	.....	.....	.....	No..	No..	100	100	.....	.....	188
25	115	0	1	4	12	22	101	3	25	Yes.	No..	75	20,600	6,712	14	189
2	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	190
18	15	1	0	.....	.....	2	0	2	10	No..	No..	88	12,010	2,100	250	191
30	37	4	4	3	10	3	10	1	16	No..	No..	100	20,200	800	200	192
12	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	193
20	50	0	0	2	7	4	1	1	7	No..	No..	550	7,225	2,450	.....	194
32	30	0	0	.....	.....	.....	.....	5	5	No..	No..	350	1,750	.....	300	195
15	44	.....	.....	.....	.....	.....	.....	2	5	Yes.	No..	400	66,734	17,604	171	196

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	ILLINOIS—cont'd.				
197	Carlinville	High School	R. B. Anderson	1	1
198	Carmi	do	E. E. Van Cleve, superintendent.	2	0
199	Carrollton	do	David Femley	2	1
200	Carthage	do	Edwin S. Combs	(2)	
201	Centralia	do	Mrs. M. A. Burdick	0	2
202	Cerro Gordo	do	I. C. Baker	1	0
203	Charleston	Union district High School	J. W. Herringer	1	2
204	Chatsworth	High School	Frank P. Manly	1	1
205	Chenoa	do	F. M. Richardson	2	0
206	Cherry Valley	do	O. J. Kern		
207	Chester	Public School	E. B. Greenlaw	3	7
208	Chicago	Hyde Park High School	W. A. McAndrew	8	4
209	do	Lake High School (corner Winter and Matteson streets).	Jas. E. Armstrong	3	5
210	do	Lakeview High School (Graceland and Ashland avenues).	A. F. Nightingale	2	8
211	do	High School (north division)	Oliver S. Wescott	6	9
212	do	High School (northwest division, corner Hayne avenue and Augusta street).	Franklin P. Fisk	8	6
213	do	High School (south division).	Jeremiah Slocum	5	13
214	do	High School (west division)	George M. Clayberg	15	16
215	Clayton	High School	O. W. Colgate	1	6
216	Clinton	do	Miss Minnie M. Bishop	1	1
217	Cuba	do	Edward C. Zoll	1	5
218	Danville	do	Lawrence A. McLauth, A. B.	2	3
219	Decatur	do	Walter A. Edwards	3	5
220	De Kalb	do	John T. Bowles	1	1
221	Delavan	do	Geo. A. Franklin	1	2
222	Downers Grove	do	Miss H. F. Yakeley	0	1
223	Dundee	do	J. R. Kellogg	1	1
224	Durand	High School (department)	Miss Annie C. Wright		
225	Dwight	High School	H. D. Fisk	1	1
226	Earlville	do	M. M. Alden	1	5
227	East St. Louis	do	C. L. Manners	2	2
228	Effingham	do	I. A. Southers	(1)	
229	Elgin	do	Robert McCay	1	2
230	Elmwood	do	Wm. J. Pringle	1	1
231	Eureka	do	W. C. Warfield	1	1
232	Evanston	do	Henry L. Boltwood	2	5
233	Farmington	do	R. V. De Groff	1	1
234	Forrest	do	Jno. C. Mountjoy, superintendent.	1	0
235	Forreston	do	W. P. Gochenour	1	1
236	Freeport	do	Miss F. A. Rosebrugh	1	4
237	Fulton	do	J. E. Bittinger	1	1
238	Galena	do	R. S. Hill	1	3
239	Galesburg	do	Mrs. Mary E. Gettenry	1	5
240	Galva	do	F. U. White	3	11
241	Geneseo	do	S. A. Harrison, superintendent.	1	2
242	Geneva	do	R. A. Beebe	1	1
243	Geneo	do	D. M. Gibbs	1	0
244	Golconda	do	Geo. A. Weldon	1	0
245	Grayville	do	W. A. Mussett	2	0
246	Greenville	do	D. W. Lindsay	1	1
247	Greenview	High School (Department)	J. S. Brazier	1	5
248	Griggsville	High School	W. R. Hatfield	1	1

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
26	39	0	0	.....	.....	.....	.....	2	10	No..	No..	600	$600	$100	$200	197
22	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	198
17	26	0	0	.....	.....	.....	.....	3	4	No..	No..	1,100	40,250	2,200	574	199
15	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	200
20	26	1	1	0	1	27	46	3	4	No..	No..	200	40	.....	64	201
4	7	.....	.....	.....	.....	.....	.....	1	6	No..	No..	300	2,525	.....	102	202
17	65	0	0	2	5	5	10	2	12	No..	No..	350	28,200	1,000	75	203
10	14	0	0	0	0	.....	.....	2	4	No..	No..	300	12,400	514	160	204
38	43	1	0	9	18	12	10	0	0	No..	No..	200	20,075	160	108	205
18	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	206
30	42	29	27	0	0	0	0	2	6	No..	No..	100	16,000	600	25	207
127	235	0	2	28	12	20	6	14	15	No..	Yes.	968	100,400	.....	.....	208
37	188	0	1	3	10	2	5	3	23	Yes.	No..	500	70,300	.....	.....	209
103	156	0	0	.....	.....	.....	.....	5	14	No..	Yes.	2,046	61,000	.....	.....	210
135	412	0	0	.....	.....	.....	.....	3	72	No..	No..	921	.....	.....	.....	211
76	290	1	1	.....	.....	.....	.....	.....	.....	No..	No..	150	57,500	.....	.....	212
168	567	5	3	5	5	3	5	16	64	No..	Yes.	1,200	.....	.....	.....	213
293	942	.....	.....	.....	.....	.....	.....	35	112	No..	No..	950	201,000	0	100	214
23	25	4	3	.....	.....	.....	.....	.....	.....	No..	No..	30	12,040	.....	.....	215
21	46	0	0	4	7	3	3	1	7	Yes.	No..	150	65,300	.....	315	216
9	21	0	0	0	0	.....	.....	4	5	Yes.	No..	20	20,025	500	50	217
75	100	0	0	.....	.....	.....	.....	5	14	No..	No..	1,250	35,500	.....	40	218
123	178	3	3	4	1	.....	.....	13	23	Yes.	No..	1,000	51,000	.....	600	219
22	28	0	0	0	0	1	0	2	7	No..	No..	350	20,200	.....	197	220
33	42	2	1	.....	.....	.....	.....	2	5	No..	No..	222	20,400	6,300	476	221
5	15	.....	.....	.....	.....	.....	.....	5	1	No..	No..	500	15,050	.....	20	222
11	23	0	0	0	0	.....	.....	3	6	No..	No..	75	20,100	30	.....	223
23	27	.....	.....	.....	.....	.....	.....	1	0	.....	.....	.....	.....	.....	.....	224
25	34	0	0	0	0	0	0	2	4	No.	No.	300	4,580	.....	180	225
18	25	0	0	.....	.....	.....	.....	0	3	Yes.	No..	123	5,150	584	158	226
6	27	0	0	0	0	.....	.....	0	1	No..	No..	120	75	.....	.....	227
20	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	228
31	80	1	1	1	3	2	3	2	6	No..	No..	500	40,200	.....	.....	229
25	30	.....	.....	2	0	.....	.....	3	3	No..	No..	600	2,600	.....	500	230
25	35	1	0	6	5	7	4	1	7	No..	No..	.....	16,200	0	116	231
89	134	3	0	12	8	20	35	11	13	No..	No..	475	33,500	0	358	232
20	40	0	0	0	0	.....	.....	1	9	No..	No..	500	200	.....	256	233
16	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	234
13	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	235
50	73	0	0	0	0	0	0	4	16	No..	No..	318	34,675	.....	126	236
11	23	0	0	0	0	.....	.....	3	4	Yes.	No..	214	8,040	.....	60	237
15	48	0	0	.....	.....	.....	.....	2	3	Yes.	No..	2,000	.....	13,800	210	238
52	101	2	4	.....	.....	.....	.....	7	19	No..	No..	323	40,500	.....	110	239
29	41	4	6	.....	.....	.....	.....	1	7	Yes.	No..	564	13,550	.....	296	240
24	29	0	0	0	1	1	0	4	1	Yes.	No..	400	70,100	.....	20	241
30	40	.....	.....	.....	.....	0	0	.....	.....	.....	.....	.....	.....	.....	.....	242
3	4	0	0	0	0	.....	.....	1	1	Yes.	No..	60	4,000	.....	90	243
11	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	244
7	8	0	0	.....	.....	.....	.....	4	2	Yes.	No..	125	59	.....	83	245
28	32	18	12	.....	.....	7	3	9	11	Yes.	No..	400	6,050	600	300	246
16	30	0	0	.....	.....	.....	.....	0	1	No..	No..	250	7,050	419	61	247
23	40	0	0	1	1	1	0	1	1	Yes.	No..	40	.....	.....	.....	248

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	ILLINOIS—cont'd.				
249	Harvard	High School	J. L. Curts	1	1
250	Henry	do	J. W. Hartnett, superintendent.	1	1
251	Highland Park	Deerfield Township High School.	Edw. W. Chase	1	1
252	Hillsboro	High School	H. M. Anderson, superintendent.	1	1
253	Hinsdale	do	J. S. Stanley	2	0
254	Ipava	do	J. E. Luckey	1	0
255	Jacksonville	Washington High School	Miss V. Graves	2	3
256	Jerseyville	High School	J. Pike, M. A	3	0
257	Kankakee	do	Chas. W. Groves	1	2
258	Kewanee	do	J. B. Russell	2	3
259	Lacon	High School (department)	Ira M. Ong	1	1
260	Lanark	High School	F. T. Oldt	1	1
261	La Grange	Lyons Township High School.	Henry W. Thurston		
262	La Salle	High School	L. A. Thomas	2	1
263	Lena	do	C. F. Philbrook	1	1
264	Le Roy	do	James W. Tavenner	1	1
265	Lewistown	do	James W. Adams	1	1
266	Lincoln	do	Ambrose M. Miller	1	2
267	Litchfield	do	Miss J. F. Rogers	1	1
268	Lockport	do	Charles Curtis	1	1
269	Loda	do	L. H. Yoder	1	3
270	Macomb	do	J. M. Clenahan	1	1
271	Marengo	do	C. W. Hart	1	1
272	Maroa	do	B. F. Shipley	1	6
273	Marseilles	do	J. P. Yoder	1	1
274	Marshall	do	L. A. Wallace	1	1
275	Martinsville	do	Wm. Randebaugh	2	4
276	Mason City	do	S. B. Roach	1	1
277	Mattoon	do	Miss Mary A. Port	1	2
278	Mayfair	Jefferson Township High School.	Chas. A. Cook	2	2
279	Mendota	Blackstone High School	Wm. Jenkins	1	3
280	Meredosia	High School	B. E. Decker	3	2
281	Metamora	do	J. S. Ward	1	0
282	Milford	do	Frank Harry	1	1
283	Minier	do	T. S. Davy	1	0
284	Minonk	do	L. J. Hancock	1	1
285	Moline	do	B. C. Caldwell	1	2
286	Momence	do		1	1
287	Monmouth	do	James C. Burns	2	0
288	Monticello	do	J. H. Martin, superintendent.	2	0
289	Morris	do	Geo. Blount	1	2
290	Morrison	do	Mrs. B. F. Burtch	1	2
291	Mt. Carroll	do	W. A. Pratt	1	1
292	Mt. Pulaski	do	William Miner	1	2
293	Nashville	do	Robt. Pence	1	1
294	Nauvoo	do	Chas. E. Smith	1	0
295	Newman	do	G. O. Moore	1	5
296	Newton	do	N. S. Scovell	1	2
297	Nokomis	High School (department)	W. B. Davis	1	1
298	Normal	High School	Mrs. H. S. Hoffman	0	2
299	Nunda	Nunda and Crystal Lake	S. W. Grimes	1	1
300	Oakland	High School	John Snyder	1	1
301	Oak Park	do	H. M. Clemens	0	4
302	Odell	do	Fred. Barton	1	1
303	Olney	do	H. W. Shreyock	(3)	
304	Onarga	do	J. R. Freebern, superintendent.	(2)	
305	Oregon	do	J. W. Gibson	1	7

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
25	35															249
16	26	0	0					1	2	No.	No.	22			$120	250
15	32	0	0	4	5	3	0	0	2	No.	No.	25	$100	$2,150		251
52	29	0	0	5	13	13	17	3	13	No.	No.	500	30,500		400	252
10	14	4	5					3	0	No.	No.	215	25	650	51	253
14	27	0	0	0	0	4	3	0	2	No.	No.	140	2,535		128	254
34	96	1	1					2	7	No.	No.	500	16,900		40	255
75	85			8	10	21	12	10	14	No.	No.	350	20,500	1,080	2,030	256
27	52	0	0	10	17	17	35	1	5	No.	No.	279				257
60	69	0	0	0	0	50	50	6	8	No.	Yes.	350	50,600	1,200	500	258
20	15															259
28	43	0	0	5	2	5	5	2	9	Yes.	No.	448	15,400	700	210	260
22	36															261
23	54	0	0													262
24	33			5	7			1	2	Yes.	No.	192	20,300	488	300	263
23	36	1	0	1	1			2	4	Yes.	No.	50	8,200	601	42	264
3	10															265
30	50	1	0					4	8	No.	No.	3,000	65,500	2,500	150	266
31	57	1	1					1	2	Yes.	No.	33	38,180	1,837	142	267
32	36	0	0					4	7	Yes.	No.	456	50,300	526	366	268
32	23	3	0	2	0	1	1	0	0	Yes.	No.	25	2,010			269
15	44	1	0	0	0	4	15	3	6	No.	No.	50	22,150			270
30	32	6	4	0	0	0	0	3	4	No.	No.	482	8,100		616	271
12	14	0	0	2	6	5	7	3	3	Yes.	No.	175	15,250	500	150	272
17	28	0	0	0	0	0	0	0	7	No.	No.	150			90	273
21	32	1	0					3	4	Yes.	No.	101	150			274
7	18	0	0	0	2	0	0	2	6	Yes.	No.	60	10,075		80	275
35	50	3	0					2	3	No.	No.	200	30,300	440	250	276
24	48	1	2	6	3	1	0	3	9	No.	No.	340	16,150		68	277
51	81	0	0	15	6	15	15	12	9	No.	No.	987	33,273		320	278
13	17	0	0	0	0	4	3	1	2	No.	No.	420	12,150			279
17	22	0	0	0	0	0	0	2	0	No.	No.	40	8,100	360	120	280
7	10	0	0	0	0	0	0	4	2	No.	No.	30	1,700	45	78	281
9	15															282
13	18	0	0	0	0	10	12	3	4	No.	No.	0	5,000		38	283
22	36	7	6	1	1	2	1	4	7	Yes.	No.	100	10,015	1,000	158	284
24	59	0	0					1	8	Yes.	No.	500	500		108	285
18	22	0	1	1	3	4	6	8	4	No.	No.	35	25,150		80	286
37	50	18	20					2	7	Yes.	No.	100	63,200	2,000	300	287
36	20															288
19	51	0	1	0	0	1	0	5	12	Yes.	No.	253	40,300		111	289
28	36							1	3	No.	Yes.					290
25	49	0	0					6	4	Yes.	No.	1,100	20,300		380	291
7	12	1	0							Yes.	No.		21,100		70	292
20	16	0	0	2	0	1	1	5	4	Yes.	No.	0	30,100	6,000	200	293
30	22	0	0	3	3	6	4	1	3	No.	No.	20	55	397	125	294
36	45	0	0	0	0	2	2	1	4	No.	No.	20	10,000			295
45	57	0	0	3	2	19	29	5	5	Yes.	No.	105	25,100	750	115	296
17	34	1	1									250	40,000	4,620	141	297
14	29	0	2					2	5	Yes.	No.	100			56	298
12	14	0	0					1	1	Yes.	No.	300	25,300		210	299
28	28	0	0					0	4	No.	No.	30	6,000		200	300
48	84	0	0	4	10	18	20	5	11	No.	No.	250	37,000	500	339	301
22	18	0	0	0	4	1	3	1	3	No.	No.	50	11,050		100	302
37	47															303
24	43															304
20	40	3	4	13	22	7	13	3	7	Yes.	No.	200	10,200		280	305

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	ILLINOIS—cont'd.				
306	Ottawa	High School	J. O. Leslie	5	5
307	Pana	do	L. S. Ham	3	3
308	Paris	do	A. Harvey	1	3
309	Paxton	do	T. L. Evans	1	1
310	Payson	do	J. E. Allen	2	2
311	Picatonica	do	Lewis Goodrich	1	1
312	Pekin	do	Miss A. S. Newman	0	3
313	Peoria	do	Alfred W. Beasley	5	5
314	Peotone	do	C. V. McReynolds	1	1
315	Perry	do	R. L. Underwood	1	3
316	Peru	do	R. L. Barton	2	2
317	Petersburg	do	J. E. Alexander	2	0
318	Pittsfield	High School (department)	George Selby	1	1
319	Plano	High School	C. C. Duffy	1	1
320	Polo	High School (department)	R. W. Barton	1	2
321	Pontiac	High School	L. E. Clelland, superintendent.	1	2
322	Princeton	do	H. C. Forbes	3	6
323	Quincy	do	Wm. B. Corbyn, D. D	2	4
324	Rantoul	do	H. P. Little	2	0
325	Ridge Farm	do	J. H. Moore	1	0
326	Robinson	do	D. W. Creekmur	1	68
327	Rock Falls	High School (department)	Sam A. Maxwell	1	1
328	Rockford	High School	Chas. A. Smith	1	6
329	Rock Island	do	J. A. Bishop	(5)	
330	Roodhouse	do	John Gavin	2	0
331	Rossville	do	H. W. Flanegin	1	1
332	Rushville	do	Nathan T. Veatch	1	1
333	Sandwich	do	W. W. Wirt	2	0
334	Savanna	do	H. H. Smith	2	9
335	Shannon	do	W. Don Smith	1	0
336	Shelbyville	do	E. H. Owen	1	0
337	Sheldon	do	M. M. Savery	1	1
338	Somonauk	do	D. Brehant	1	0
339	Sparland	do	C. H. Watt	1	0
340	Sparta	do	J. M. Nickles	2	2
341	Springfield	do	Wm. Helmle	2	6
342	Sterling	High School (Sterliag)	Miss Anna Parmelee	1	3
343	do	Wallace High School	S. B. Hursh	1	2
344	Streator	High School	R. Williams	3	5
345	Sycamore	do	A. J. Blanchard	1	1
346	Tallula	do	J. R. Boulware	1	0
347	Taylorville	West High School	D. O. Witmer	1	1
348	Thomson	High School	Thos. N. Fleming	1	0
349	Toulon	do	J. H. Bromall	1	1
350	Turner	High School (department)	M. Madison	1	0
351	Urbana	High School	J. W. Hays	2	1
352	Vandalia	do	W. F. Baxter	2	1
353	Virden	do	P. M. Silloway	2	0
354	Virginia	do	T. W. B. Everhart, superintendent.	1	1
355	Warren	do	E. A. Fritter	1	1
356	Warsaw	do	Arthur W. Hussey	1	1
357	Washburn	do	A. C. Hazen	1	0
358	Washington	do	F. L. Calkins	1	2
359	Watseka	High School, district 7	Henry F. Rulison	1	1
360	Waukegan	High School	C. L. Sawyer	(4)	
361	Waverly	do	I. M. Humes	1	1
362	Wenona	do	J. E. W. Morgan	1	1
363	Wheaton	do	J. K. Rassweiler	1	1
364	White Hall	do	Geo. W. Smith	1	1
365	Wilmington	do	G. E. Perry	(3)	
366	Winchester	do	Wm. Gay	2	0

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
96	129	0	0	20	20	.....	.....	3	21	No..	Yes.	1,000	$20,300	$10,000	$750	306
39	57	0	0	.....	.....	.....	.....	4	.....	No..	No..	500	40,200	85	100	307
34	77	1	1	34	77	.....	.....	3	9	Yes.	No..	500	10,500	17,000	150	308
24	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	309
16	26	0	0	.....	.....	.....	.....	0	3	Yes.	No..	250	7,555	.....	157	310
16	27	0	0	.....	.....	.....	.....	2	4	No..	No..	75	2,625	.....	294	311
20	58	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	.....	.....	312
149	241	1	0	10	12	9	16	10	33	No..	No..	.....	60,800	12,500	.....	313
23	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	203	.....	.....	.....	314
7	18	0	0	0	0	0	0	0	9	No..	No..	12	12,000	.....	134	315
28	41	0	0	.....	.....	.....	.....	0	5	Yes.	No..	.....	10,150	.....	130	316
27	36	0	0	5	7	.....	.....	6	6	No..	No..	.....	.....	.....	.....	317
40	48	12	8	2	4	6	4	9	10	Yes.	Yes.	50	40,150	.....	220	318
20	20	.....	.....	.....	.....	.....	.....	2	5	.....	.....	.....	9,650	500	150	319
17	37	0	0	5	10	.....	.....	5	5	Yes.	No..	500	16,275	500	275	320
75	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	321
82	126	1	2	.....	.....	19	15	4	5	Yes.	No..	1,100	46,000	0	600	322
45	123	.....	.....	.....	.....	.....	.....	8	18	Yes.	No..	.....	800	.....	.....	323
20	18	0	0	2	3	3	6	3	1	Yes.	No..	26	8,000	.....	70	324
11	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100	.....	.....	.....	325
10	30	1	1	0	0	0	0	0	7	Yes.	No..	100	15,000	.....	40	326
21	27	0	0	1	2	3	4	0	3	Yes.	No..	364	20,100	.....	65	327
63	133	1	2	3	4	.....	.....	5	27	No..	No..	865	41,350	7,566	733	328
57	99	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	329
14	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	330
13	26	0	0	.....	.....	6	18	.....	.....	No..	No..	125	20,250	63	250	331
14	26	0	0	0	0	0	0	3	6	Yes.	No..	285	40,275	10,261	71	332
15	20	5	7	0	0	0	0	.....	.....	Yes.	No..	125	5,045	5,509	65	333
29	61	0	0	.....	.....	.....	.....	4	7	Yes.	No.	130	.....	.....	120	334
13	17	0	0	0	0	0	0	2	3	No..	No..	150	3,000	.....	25	335
17	32	15	22	3	4	0	0	1	6	No..	No..	1,200	50,200	14,866	184	336
.....	.....	0	1	.....	.....	.....	.....	4	2	No..	No..	40	75	.....	.....	337
8	8	0	0	.....	.....	.....	.....	0	0	No..	No..	50	2,540	183	90	338
4	1	0	0	.....	.....	.....	.....	0	0	No..	No..	10	10,000	.....	.....	339
66	72	0	1	3	4	0	0	1	10	No..	No..	700	15,250	4,596	900	340
99	156	4	6	.....	.....	.....	.....	10	34	Yes.	No..	500	40,250	9,000	1,050	341
46	58	1	0	.....	.....	.....	.....	3	8	No..	No..	500	10,100	.....	852	342
9	20	1	0	2	1	2	2	2	4	No..	No..	200	6,250	.....	.....	343
51	103	0	0	2	2	2	4	6	12	No..	No..	550	50,500	122	275	344
40	40	0	0	0	0	1	1	3	3	Yes.	No..	800	30,700	800	409	345
8	18	1	.....	0	0	2	4	1	1	No..	No..	165	4,075	.....	96	346
27	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	347
13	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	348
9	27	.....	.....	.....	.....	.....	.....	1	4	No..	No..	250	12,050	.....	39	349
10	10	.....	.....	.....	.....	.....	.....	5	5	.....	.....	400	40,000	.....	90	350
30	37	7	8	.....	.....	23	34	5	6	Yes.	No..	1,200	35,500	10,000	450	351
18	38	.....	.....	.....	.....	.....	.....	0	4	Yes.	No..	200	27,200	.....	56	352
33	47	.....	1	.....	.....	.....	.....	2	6	No..	No..	20	18,675	.....	208	353
13	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	354
26	39	0	0	.....	.....	.....	.....	1	4	Yes.	No..	50	25,100	4,900	540	355
13	20	.....	1	0	0	0	0	0	3	Yes.	No..	100	15,460	4,286	.....	356
17	24	0	0	0	0	0	0	5	6	No..	No..	.....	5,000	.....	480	357
45	54	0	0	0	0	0	0	5	3	Yes.	No..	440	10,200	.....	80	358
30	39	3	10	0	0	16	23	2	6	No..	No..	200	10,300	6,000	150	359
47	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	360
14	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	361
32	30	0	0	.....	.....	.....	.....	4	6	No..	No..	400	3,100	.....	400	362
18	24	.....	.....	.....	.....	.....	.....	2	7	No..	No..	250	4,000	500	230	363
31	47	0	0	0	0	0	0	5	7	No..	No..	600	22,100	0	100	364
16	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	365
24	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	366

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	ILLINOIS—cont'd.				
367	Winnebago	High School	P. H. Chase	1	0
368	Woodhull	do	J. A. Warrick	1	1
369	Woodstock	do	—— Miller	1	1
370	Yorkville	do	John N. Wayman	1	1
	INDIANA.				
371	Amboy	Amboy Academy	J. Z. A. McCaughan	1	0
372	Anderson	High School	J. B. Pearcy *a*	2	1
373	Argos	do	E. M. Teeple	1	1
374	Attica	do	Miss Kate Pearson	1	1
375	Auburn	do	B. B. Harrison	2	0
376	Bedford	do	Joseph F. Thornton	2	1
377	Bloomington	do	Miss Grace Woodburn	2	*a*13
378	Bluffton	do	P. A. Allen	2	2
379	Boonville	do	Chas. E. Clarke	1	0
380	Bourbon	do	B. McAlpine	1	1
381	Brazil	do	J. C. Gregg	2	0
382	Bremen	do	Henry H. Miller	2	3
383	Bristol	do	J. E. McCartney	2	2
384	Brookville	do	B. M. King	1	6
385	Brownstown	do	John R. Owens	1	0
386	Butler	do	E. M. Teeple, superintendent.	1	*a*6
387	Cambridge City	do	N. C. Johnson	2	1
388	Carmel	do	David Wells	4	2
389	Clinton	do	J. H. Tomlin	2	0
390	Columbia City	do	W. C. Palmer	2	*a*9
391	Connersville	do	E. M. Michener	2	0
392	Corydon	do	G. B. Haggett	1	1
393	Covington	do	S. A. D. Harry	1	0
394	Crawfordsville	do	I. M. Wellington	1	2
395	Decatur	do	Miss Stella Thompson	1	1
396	Dublin	do	Walter S. Davis	2	0
397	Edinburg	do	F. L. Harris	2	0
398	Elizabethtown	do	J. L. Dixon	2	2
399	Elkhart	do	Z. B. Leonard	2	2
400	Elwood	do	H. F. Wilkie	1	0
401	Evansville	High School (colored)	Jno. R. Blackburn	1	0
402	do	High School (white)		2	6
403	Fort Wayne	Central Grammar School	Chester T. Lane	2	6
404	Frankfort	High School	John A. Wood	2	1
405	Franklin	do	Miss Kittie E. Palmer	1	3
406	Garrett	do	F. M. Merica	3	*a*4
407	Goshen	do	W. H. Sims, superintendent.	1	3
408	Greencastle	do	R. A. Ogg	(4)	
409	Greenfield	do	Geo. S. Wilson	2	0
410	Greensburg	do	Geo. L. Roberts	2	2
411	Greenwood	do	Chas. F. Patterson, superintendent.	2	*a*6
412	Hagerstown	do	P. V. Voris	2	4
413	Huntingburg	do	F. S. Morgenthaler	1	0
414	Huntington	do	Miss E. E. Kirtland	1	2
415	Indianapolis	High School, No. 1	Willard W. Grant	7	10
416	do	High School, No. 2	Geo. W. Hufford	3	3
417	Jolietville	Jolietville School	F. W. Baxter	1	2
418	Knightstown	High School	Oscar R. Baker	3	0
419	Kokomo	do	H. G. Woody	2	2
420	Lafayette	do	J. A. Zeller	1	3
421	Lagrange	do	A. J. Johnson, superintendent.	2	1
422	La Gro	do	J. C. Comstock	1	0

a Also give instruction in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
6	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	367
5	8	0	0	0	0	0	0	2	0	No..	No..	40	$2,515	.....	$225	368
28	32	0	0	.....	.....	.....	.....	4	4	No..	No..	350	40,200	$62	132	369
25	26	0	0	.....	.....	.....	.....	4	2	No..	No..	7	13,100	.....	400	370
27	23	0	0	1	3	.....	.....	1	3	No..	No..	50	8,050	.....	70	371
35	50	1	0	0	0	5	0	7	9	No..	No..	0	50,100	.....	.....	372
18	17	0	0	0	0	0	0	1	6	No..	No..	350	5,000	2,500	18	373
16	30	0	0	0	1	2	0	0	1	No..	No..	500	50,300	.....	125	374
21	42	0	0	.....	.....	.....	.....	0	4	No..	No..	285	30,200	5,859	134	375
12	42	0	0	.....	.....	0	0	2	3	No..	No..	200	1,020	.....	70	376
23	50	31	37	20	20	.....	.....	3	12	Yes.	No..	0	50,000	5,321	160	377
42	46	0	0	0	0	.....	.....	6	13	No..	No..	1,200	150	1,195	50	378
12	18	0	0	.....	.....	.....	.....	1	5	No..	No..	100	250	1,200	85	379
30	27	0	0	0	0	.....	.....	1	3	No..	No..	200	15,050	.....	70	380
18	43	0	0	6	24	12	18	6	11	No..	No..	242	.....	.....	60	381
16	15	0	0	0	0	1	0	4	2	No..	No..	50	6,150	1,936	42	382
41	37	.....	.....	13	4	2	8	.....	.....	No..	No..	20	100	.....	.....	383
21	17	0	0	0	0	0	0	2	3	No..	No..	100	12,050	4,000	65	384
4	6	0	0	1	3	3	3	.....	.....	No..	No..	200	5,025	3,000	.....	385
18	15	1	1	2	0	0	0	2	0	Yes.	No..	250	15,000	2,700	15	386
30	45	11	8	5	7	.....	.....	6	9	Yes.	No..	400	30,300	6,553	86	387
22	10	0	0	.....	.....	.....	.....	6	0	No..	No..	200	8,000	.....	.....	388
7	21	0	0	0	0	4	12	2	6	No..	No..	25	12,100	.....	300	389
26	35	0	0	0	0	0	0	5	3	No..	No..	150	48,333	9,369	40	390
16	30	0	1	.....	.....	.....	.....	5	3	No..	No..	250	40,250	15,000	150	391
13	21	0	0	5	3	0	0	4	1	Yes.	No..	500	7,000	3,000	150	392
3	12	0	0	0	0	.....	.....	0	2	No..	No..	100	37,050	800	.....	393
19	83	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	394
11	34	.....	.....	.....	.....	.....	.....	2	3	No..	No..	200	29,110	3,112	.....	395
17	19	0	0	.....	.....	.....	.....	4	4	No..	No..	350	7,100	480	164	396
22	31	1	2	.....	.....	.....	.....	5	2	Yes.	No..	150	15,200	.....	208	397
12	17	.....	.....	3	6	.....	.....	1	5	No..	No..	200	3,200	1,357	10	398
41	63	.....	.....	.....	.....	.....	.....	2	6	No..	No..	2,600	21,000	3,500	125	399
14	8	.....	.....	.....	.....	.....	.....	0	0	No..	No..	40	1,040	2,021	2	400
9	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	401
64	149	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	402
74	184	0	0	4	1	1	0	0	29	Yes.	No..	500	.....	.....	.....	403
40	83	0	1	40	83	.....	.....	2	5	No..	No..	1,150	.....	.....	.....	404
37	53	0	6	.....	.....	.....	.....	3	9	No..	No..	200	15,025	2,500	.....	405
18	24	.....	.....	.....	.....	.....	.....	1	1	Yes.	No..	.....	20,000	.....	.....	406
40	59	0	1	.....	.....	.....	.....	6	6	No..	No..	1,500	60,500	18,000	100	407
52	54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	408
25	42	0	0	.....	.....	.....	.....	3	3	No..	No..	1,200	25,200	8,200	200	409
36	64	1	2	.....	.....	.....	.....	7	11	No..	No..	50	20,200	2,000	230	410
20	31	3	1	12	16	.....	.....	0	6	No..	No..	400	12,050	0	100	411
20	20	.....	.....	.....	.....	.....	.....	2	2	Yes.	No..	400	.....	.....	400	412
10	0	.....	.....	1	1	.....	.....	2	2	No..	No..	164	7,050	.....	.....	413
25	43	0	0	3	2	1	0	2	6	No..	No..	4,463	70,200	22,481	0	414
285	557	6	12	5	5	.....	.....	20	53	No..	No..	2,000	116,000	18,022	114	415
51	128	3	3	.....	.....	.....	.....	.....	.....	No..	No..	416	20,650	.....	.....	416
11	14	0	0	.....	.....	6	8	.....	.....	No..	No..	15	80	.....	.....	417
21	47	6	1	0	5	.....	.....	2	10	No..	No..	100	35,500	1,200	210	418
39	47	.....	.....	2	4	0	0	2	10	No..	No..	400	75,300	.....	.....	419
24	108	0	5	0	0	0	0	3	11	No..	No..	11,000	40,300	.....	0	420
25	31	0	0	5	3	.....	.....	7	4	Yes.	No..	200	35,100	4,800	400	421
12	14	0	0	4	1	.....	.....	2	0	No..	No..	565	12,100	.....	95	422

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	IOWA—continued.				
597	Perry	High School	C. M. Pinkerton, superintendent.	2	1
598	Postville	High School (department)	J. F. Smith	1	5
599	Red Oak	High School	H. H. Moulux	2	1
600	Riverton	do	Morris Dailey	2	2
601	Rock Rapids	do	E. E. Blanchard	1	2
602	Sabula	do	F. A. Howe	1	4
603	Sac City	do	H. H. Fellows	1	1
604	St. Charles	do	J. D. Phillips	2	2
605	Sanborn	do	W. J. Simpson	1	1
606	Seymour	High School (department)	W. Wagner	2	3
607	Sheffield	High School	Geo. F. Thompson	1	2
608	Shelby	do	H. A. Field	1	3
609	Sheldon	do	W. S. Wilson	1	1
610	Shenandoah	do	Miss Margaret Rees	1	2
611	Sigourney	do	J. P. Dodds	1	1
612	Sioux City	do		(5)	
613	Sioux Rapids	do	J. E. Durkee	1	3
614	Spencer	do	F. E. Williard	1	1
615	Spirit Lake	High School (department)	F. E. Palmer	1	4
616	State Center	High School	Miss Lucy Curtis	0	2
617	Storm Lake	do	H. G. Lamson	1	1
618	Stuart	do	O. A. Shotts, superintendent.	1	a14
619	Tabor	High School (department)	E. H. Hamilton	1	0
620	Tama	High School	Horace M. Rebok	1	a0
621	Thurman	High School (department)	J. F. Hester	1	3
622	Toledo	High School	J. B. Young	1	1
623	Traer	do	Edw. H. Griffin	1	4
624	Union	do	W. W. Rodwell	1	0
625	Victor	do	S. T. May	1	a3
626	Villisca	do	J. A. McLean	1	2
627	Vinton	do	J. W. McClellan	1	3
628	Washington	do	D. W. Lewis	1	2
629	Waterloo	High School (East)	Miss Lydia Hinman	1	3
630	Waukon	High School	C. P. Colgrove	1	1
631	Waverly	do	S. H. Sheakley	3	0
632	West Branch	do	A. T. Hukill, A. M	1	1
633	West Liberty	do	Miss L. Lewis	1	2
634	West Union	do	F. P. Hocker	1	1
635	Williamsburg	do	C. R. Zimmerman	1	4
636	Wilton Junction	do	A. L. Brower	1	1
637	Winterset	High School (department)	C. H. Carson	1	2
638	Wyoming	do	J. J. Billingsly	1	1
	KANSAS.				
639	Abilene	High School	W. S. Jenks	2	1
640	Almena	do	Frank H. Baker	1	2
641	Anthony	do	F. C. Raney	1	1
642	Ashland	do	D. A. Tear	1	3
643	Atchison	do	J. T. Dobell	1	2
644	Belle Plaine	do	D. A. Iliff	2	3
645	Beloit	do	J W. Hullinger	1	1
646	Blue Mound	do	E. A. Allen		
647	Brookville	High School (department)	T. J. Rollman	2	2
648	Burrton	do	N. C. Stott, A. B	1	0
649	Cawker City	High School	F. C. Perkins	2	0
650	Chanute	do	S. W. Black	2	0
651	Chapman	do	S. M. Cook	3	2
652	Cherokee	do	T. B. Mosher, county superintendent.		

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
20	40	0	0	----	----	----	----	3	11	Yes.	No..	324	$30,400	-------	$275	597
20	25	0	0	----	----	3	1	0	0	No..	No..	100	10,000	-------	400	598
27	50	2	0	0	----	----	----	4	10	No..	No..	670	12,300	$2,540	126	599
12	16	0	0	4	5	----	----	1	2	Yes.	No..	70	5,000	-------	-------	600
24	46	0	0	12	20	----	----	2	3	Yes.	No..	234	10,200	-------	350	601
8	34	0	0	----	----	----	----	2	8	No..	No..	0	14,025	-------	150	602
23	37	0	0	----	----	----	----	2	2	Yes.	No..	100	17,125	-------	50	603
24	26	0	0	4	2	6	14	1	2	No..	No..	0	4,025	900	150	604
18	22	0	0	8	12	6	9	0	0	Yes.	No..	329	6,250	-------	25	605
14	17	----	----	1	0	----	----	0	0	No..	No..	200	2,000	-------	-------	606
25	35	0	0	0	0	----	----	----	----	No..	No..	0	-------	400	50	607
19	20	0	0	0	0	0	0	0	0	No..	No..	200	3,150	-------	350	608
8	9	----	----	1	1	1	0	0	0	No..	No..	275	10,000	-------	-------	609
15	55	0	0	0	0	0	0	5	5	Yes.	No..	100	15,300	-------	263	610
16	34	2	1	----	----	----	----	5	7	No..	No..	0	18,100	-------	100	611
15	20	3	2	0	0	3	2	3	6	Yes.	No..	175	4,491	-------	40	613
23	37	0	0	2	3	0	0	1	9	Yes.	No..	40	13,515	-------	48	614
8	16	0	0	----	----	----	----	2	2	Yes.	No..	200	-------	-------	-------	615
10	15	0	0	----	----	----	----	5	9	Yes.	No..	300	20,050	467	295	616
22	23	0	0	0	0	0	0	8	3	Yes.	No..	200	8,100	-------	-------	617
40	52	0	0	----	----	----	----	2	4	No..	No..	300	35,000	-------	50	618
9	11	0	0	5	7	1	3	2	4	No..	No..	45	6,020	-------	220	619
8	36	0	0	1	0	2	3	1	2	No..	No..	265	18,200	650	65	620
12	10	0	0	0	0	----	----	2	3	Yes.	No..	111	8,000	-------	265	621
27	57	4	4	----	----	----	----	8	24	Yes.	No..	250	30,200	-------	290	622
36	47	0	1	3	3	2	1	3	10	Yes.	No..	300	10,100	-------	425	623
17	32	----	----	----	----	----	----	0	0	No..	No..	250	25	-------	-------	624
8	28	0	0	0	0	1	6	3	5	No..	No..	300	5,100	2,600	225	625
39	57	1	1	12	8	6	6	2	9	Yes.	No..	350	20,200	7,375	614	626
44	65	0	0	----	----	----	----	5	5	Yes.	No..	250	10,200	2,100	250	627
49	79	----	----	----	----	----	----	8	23	Yes.	No..	40	30,400	9,229	268	628
35	60	0	0	5	11	2	----	2	10	No..	No..	500	29,500	200	105	629
34	46	0	0	6	4	0	4	1	5	Yes.	No..	350	18,400	1,300	200	630
31	52	0	0	8	17	3	1	4	10	Yes.	No..	1,000	15,500	200	600	631
30	36	0	0	0	0	0	0	3	6	No..	No..	276	4,025	0	329	632
30	39	0	0	0	1	0	1	1	9	No..	No..	200	10,100	3,000	200	633
23	30	0	0	----	----	----	----	2	1	No..	No..	0	1,790	677	179	634
34	34	0	0	----	----	----	----	0	0	Yes.	No..	40	12,050	-------	400	635
24	36	0	0	3	2	----	----	3	4	No..	Yes.	325	12,300	-------	40	636
20	45	1	0	----	----	----	----	6	15	No..	No..	200	25,300	425	200	637
25	20	----	----	----	----	----	----	1	5	No..	No..	79	10,000	-------	60	638
34	55	0	0	0	0	0	0	3	12	No..	No..	1,000	64,750	-------	75	639
6	11	0	0	0	0	0	0	2	4	No..	No..	250	16,125	-------	57	640
30	35	0	1	5	10	3	5	3	4	Yes.	No..	200	30,300	19	-------	641
11	17	0	0	0	0	0	0	2	2	Yes.	No..	-------	12,150	2,600	5	642
29	61	6	10	2	2	0	0	2	8	Yes.	No..	200	50,100	2,100	900	643
15	20	0	0	0	0	2	0	4	4	No..	No..	200	10,200	1,927	140	644
37	37	2	1	0	0	5	5	7	5	Yes.	No..	350	30,035	956	342	645
10	11	----	----	----	----	----	----	----	----	----	----	----	-------	-------	-------	646
18	12	0	0	0	0	18	12	3	3	No..	No..	180	8,100	280	-------	647
6	2	0	0	0	0	0	0	1	3	Yes.	No..	450	10,100	0	0	648
21	26	3	3	0	0	6	3	6	5	No..	No..	367	10,200	363	161	649
36	51	3	0	----	----	----	----	4	3	No..	No..	136	40,000	-------	128	650
65	72	0	0	6	0	3	0	0	0	Yes.	No..	300	15,150	7,000	-------	651
24	28	----	----	----	----	----	----	----	----	----	----	----	-------	-------	-------	652

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	KANSAS—continued.				
653	Cherryvale	High School	S. Grant Harris, superintendent.	2	0
654	Chetopa	High School (department)	E. A. Herod	1	7
655	Clay Centre	High School	E. L. Cowdrick	0	2
656	Coffeyville	do	Wm. M. Sinclair, superintendent.		
657	Colby	do	J. W. McDougal	1	a4
658	Coldwater	High School (department)	Jno. Curran	1	3
659	Columbus	High School	W. J. Hull, superintendent.	3	0
660	Concordia	do	W. H. Wearen	1	1
661	Cottonwood	do	Mrs. S. P. Grisham	0	2
662	Delphos	do	Miss H. Eecker		
663	Dodge City	do	E. D. Webb, superintendent.	1	0
664	Downs	do	D. F. Beacon	1	0
665	El Dorado	do			
666	Ellis	do	A. W. Whelan	2	a3
667	Emporia	High School (Garfield building).	W. H. Johnson	(4)	
668	Erie	High School	C. E. Merwin	1	0
669	Eureka	do	Mrs. B. B. Baird	1	2
670	Florence	High School (department)	E. E. Barker	1	0
671	Fort Scott	High School		2	2
672	Galesburg	High School (department)	O. H. P. Bowers	1	1
673	Geneva	High School	H. H. Jones	1	2
674	Girard	do	J. W. Weltner	1	1
675	Glen Elder	High School (department)	T. S. Johnson	1	0
676	Goodland	do	T. J. Rush	1	0
677	Greensburg	High School	Warren Baker		
678	Grenola	High School (department)	J. F. Deal	1	4
679	Halstead	High School	S. W. McGarrah	2	0
680	Hays City	do	L. H. Gehman	1	1
681	Herington	do	B. F. Nihart	0	a6
682	Hiawatha	do	Miss Margaret Sharet	1	3
683	Holton	do	H. M. Johnson, superintendent.	2	0
684	Horton	do	H. F. Graham	2	0
685	Howard	High School (department)	Geo. C. Heritage	2	a6
686	Hutchinson	High School	H. C. Minnich, superintendent.	1	2
687	Independence	do	S. M. Nees	2	0
688	Iola	do	Miss Hattie T. Williams	2	1
689	Junction City	do	S. V. Mallory, superintendent.	1	1
690	Kansas City	do	John Wherrel	3	3
691	Kingman	do	A. Gridley, jr., superintendent.	1	1
692	La Crosse	do	W. A. Salter	1	3
693	La Cygne	do	R. A. Hampshire	2	4
694	Lakin	do	R. M. Brockman	1	0
695	Larned	do	Miss Luella B. Fonts	2	11
696	Lawrence	do	E. Stanley, superintendent.	2	4
697	Leavenworth	do	Geo. G. Ryan	3	4
698	Lindsborg	High School (department)	J. E. Welin, A. B	1	3
699	Lyndon	High School	J. Adams	1	1
700	Lyons	High School (department)	I. N. McCash, superintendent.	1	0
701	McPherson	High School	Addison Ludlum, superintendent.	1	1
702	Manhattan	do	E. O. Sisson	2	0
703	Marion	High School (department)	David W. De Lay, superintendent.	1	1

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
18	20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	653
20	26	50	65	4	8	1	0	0	9	Yes.	No..	25	$30,040	$3,000	$240	654
27	39	0	0	----	----	----	----	2	3	Yes.	No..	900	35,350	1,200	300	655
19	25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	656
14	16	0	0	0	0	4	5	2	0	----	No..	54	20,150	200	105	657
20	15	9	8	25	40	0	0	----	----	No..	No..	150	20,025	175	25	658
21	29	----	----	----	----	----	----	----	----	No..	----	----	----	----	----	659
19	26	5	7	3	0	3	0	4	4	Yes.	No..	200	40,000	----	219	660
23	22	5	5	0	0	23	22	3	1	Yes.	No..	300	10,200	3,432	154	661
3	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	662
12	16	3	4	----	----	----	----	0	0	Yes.	No..	150	25,100	754	----	663
15	17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	664
22	48	----	----	----	----	----	----	----	----	----	----	----	----	----	----	665
14	15	0	0	0	0	0	3	----	----	Yes.	No..	225	7,000	256	----	666
29	41	3	3	15	20	4	2	4	7	No..	No..	100	8,150	0	----	667
22	34	0	0	3	1	----	----	----	----	No..	No..	----	10,000	----	----	668
19	36	1	0	0	0	0	0	0	2	No..	No..	300	15,400	----	60	669
17	15	3	3	0	0	0	0	1	12	No..	No..	40	15,100	4,070	21	670
25	47	----	----	----	----	----	----	----	----	----	----	----	----	----	----	671
29	35	0	0	0	0	0	0	----	----	No..	No..	25	2,000	----	----	672
3	9	0	2	0	0	0	0	1	5	No..	No..	50	1,200	900	0	673
17	18	1	0	16	16	1	2	6	7	Yes.	No..	200	3,400	0	240	674
1	5	0	0	0	0	0	0	0	0	No..	No..	101	4,000	----	----	675
12	22	0	0	12	22	0	0	0	0	No..	No..	0	20,000	----	----	676
9	13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	677
8	9	----	----	----	----	----	----	----	----	Yes.	No..	50	8,500	250	100	678
17	27	0	0	8	14	9	13	3	3	Yes.	No..	350	14,120	----	----	679
30	35	0	0	6	9	0	0	2	2	Yes.	No..	300	12,100	545	----	680
15	15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	681
37	60	0	0	----	----	----	----	3	16	Yes.	Yes.	50	36,150	1,200	90	682
23	64	----	----	----	----	----	----	----	----	----	----	----	----	----	----	683
30	45	0	0	----	----	----	----	0	0	No..	No..	200	25,000	2,000	80	684
20	35	0	1	0	0	0	0	0	0	Yes.	No..	150	15,150	5,200	90	685
31	47	----	----	----	----	----	----	2	3	Yes.	No..	500	30,500	----	50	686
33	40	0	0	0	0	0	0	1	3	Yes.	No..	0	35,050	10,000	75	687
54	69	1	0	6	4	2	3	4	5	No..	No..	100	20,100	----	300	688
24	36	----	----	----	----	----	----	----	----	----	----	----	----	----	----	689
84	168	----	----	1	0	0	0	5	12	No..	No..	0	17,550	6,017	12	690
15	28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	691
20	16	0	0	5	2	----	----	0	0	No..	No..	50	12,200	2,000	----	692
6	16	35	50	10	12	0	2	4	3	No..	No..	75	2,150	----	80	693
4	13	0	0	0	0	0	0	0	0	No..	No..	0	----	----	----	694
51	57	12	15	1	1	1	0	3	8	Yes.	No..	50	425	----	75	695
101	177	----	----	----	----	----	----	----	----	----	----	----	----	----	----	696
110	150	4	6	14	6	4	2	12	18	No..	No..	400	53,000	----	2,600	697
18	14	0	0	----	----	----	----	0	6	No..	No..	50	10,125	558	----	698
15	25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	699
11	6	2	2	----	----	----	----	0	2	Yes.	No..	300	45,025	700	28	700
18	33	4	2	5	9	5	9	2	4	No..	No..	300	70,200	1,000	30	701
13	25	1	2	2	2	11	20	0	2	Yes.	No..	400	20,050	----	----	702
25	35	3	5	3	5	2	2	1	5	No..	No..	20	35,050	500	25	703

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	KANSAS—continued.				
704	Moline	High School (department)	W. E. Pruett	1	3
705	Morantown	do	L. L. Carter	2	1
706	Neodesha	do	C. M. Light	3	a5
707	Newton	High School	W. S. Allen, A. B., B. D.	1	2
708	Norton	do	J. H. Ely	1	1
709	Osage City	do	Jno. A. McClain	2	0
710	Osage Mission	High School (department)	J. F. Roe	1	3
711	Osborne	High School	Le Roy T. Weeks, superintendent.	------	------
712	Oswego	do	Miss Evelyn B. Baldwin	1	0
713	Ottawa	do	Frank P. Smith, superintendent.	1	2
714	Paola	do	E. A. Farrington	1	1
715	Parsons	do			
716	Peabody	do	W. M. Kallock	2	1
717	Pittsburg	do	T. P. Bogar	2	1
718	Plainville	do	G. M. Brown	3	1
719	Pleasanton	High School (department)	Frank McClellan	2	0
720	Pratt	High School	W. H. Wasson, superintendent.	1	0
721	Randolph	do	C. G. Swingle	a1	2
722	Russell	do	L. A. Park	1	0
723	Sabetha	do	Isaac B. Morgan	1	1
724	Salina	do	C. M. Stevens	0	2
725	Sedgwick	do	H. W. Charles	1	1
726	Seneca	do		2	1
727	Smith Center	do	J. M. Mosher	1	0
728	Solomon City	do	W. W. Reed	2	0
729	Sterling	do	S. B. Todd	1	1
730	Strong City	do	W. L. Edwards	2	2
731	Topeka	do	H. G. Larimer	3	2
732	Washington	do	J. W. Dinsmore, superintendent.	1	1
733	Weir	High School (department)	Geo. W. Walker	1	0
734	Wellington	High School	Mrs. M. M. Carson	1	2
735	Wichita	do	U. T. Shull	2	2
736	Winfield	do	J. H. Lee	1	1
737	Yates Center	do	T. H. Jones	1	6
	KENTUCKY.				
738	Albany	High School	T. M. Guthrie	1	1
739	Ashland	do	J. G. Crabbe, superintendent.	1	1
740	Bardstown	do	J. C. W. Beckham	2	1
741	Butler	do	H. H. Tye	2	1
742	Covington	do	J. W. Hall	2	4
743	Corydon	High School (department)	P. H. Kirsh	1	4
744	Crab Orchard	Collegiate Institute	J. W. Smith	1	1
745	Cynthiana	High School	C. A. Leonard	1	1
746	Danville	do	W. C. Grinstead	1	2
747	Dayton	do	R. M. Mitchell, superintendent.	1	0
748	Dixon	do	H. B. Wheeler	2	2
749	Flemingsburg	do	Geo. O. Willett	2	0
750	Harrodsburg	do	Chas. W. Bell	1	3
751	Kuttawa	do	Jno. F. Nicholson	1	2
752	Louisville	High School (male)	Maurice Kirby	9	0
753	Mount Sterling	High School (department)	Mrs. W. F. Hibler	0	1
754	Newport	Highland High School	James McGinniss	1	0
755	do	High School	John Burke	0	4
756	Nicholasville	Graded School and Bethel Academy.	F. T. Catlin	1	1
757	Owensboro	High School (department)	W. A. Hester	1	2
758	Paducah	High School	E. E. Hand	1	1

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
20	24	0	0	0	0	0	0	.....	.....	No..	No..	77	$4,075	$163	$34	704
4	5	0	0	0	0	1	0	0	5	No..	No..	15	1,000	1,100	6	705
23	24	4	2	15	16	0	0	4	5	Yes.	No..	60	30,200	3,500	60	706
25	39	0	0	.....	.....	.....	.....	4	5	Yes.	No..	75	30,150	.....	80	707
45	48	0	1	0	0	.....	.....	5	4	No..	No..	0	15,000	.....	200	708
15	21	0	0	.....	.....	.....	.....	0	0	No..	No..	1,000	35.000	11,000	22	709
20	19	10	8	4	5	11	7	5	6	No..	No..	0	15,150	1,000	.....	710
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	711
25	48	0	0	0	1	0	0	1	4	No..	No..	200	18,300	5,800	400	712
39	100	.....	.....	0	0	0	0	6	11	Yes.	No..	150	55,150	.....	.....	713
20	31	0	0	0	0	30	45	2	0	Yes.	No..	10	50,000	1,240	68	714
19	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	715
45	35	1	3	7	8	.....	.....	6	8	Yes.	No..	.....	20,200	600	120	716
22	32	0	0	0	0	0	1	0	1	Yes.	No..	500	25,150	1,700	.....	717
20	15	0	0	2	1	0	0	.....	.....	No..	No..	.....	11,500	400	.....	718
14	16	5	6	0	0	14	16	8	4	Yes.	No..	150	20,150	3,680	60	719
5	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	720
2	6	0	0	3	5	.....	.....	2	5	Yes.	No..	150	6,500	165	60	721
18	29	1	1	2	0	1	0	5	4	No..	No..	4	10,000	.....	.....	722
34	38	0	0	4	6	15	40	4	12	Yes.	No..	60	12,050	.....	155	723
20	47	0	2	6	12	8	14	1	2	No..	No..	853	97,675	25,741	0	724
14	26	0	0	0	0	2	2	2	4	Yes.	No..	600	10,050	3,771	62	725
38	59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	726
3	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	727
7	26	0	0	2	6	.....	.....	0	1	No..	No..	500	7,200	400	100	728
22	23	0	0	0	0	13	8	0	1	Yes.	No..	230	200	.....	30	729
26	23	15	18	3	4	.....	.....	0	1	Yes.	No..	100	5,060	.....	50	730
80	170	12	20	40	79	40	91	13	36	Yes.	No..	250	350	.....	125	731
13	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	732
12	26	0	0	0	0	.....	.....	0	0	No..	No..	60	15,085	.....	.....	733
21	39	0	0	1	0	0	0	4	9	No..	No..	900	65,150	1,850	125	734
54	122	0	0	2	4	1	10	3	14	No..	No..	150	3,250	.....	45	735
18	34	0	0	0	0	0	0	5	2	No..	No..	200	40,075	1,400	60	736
10	18	2	4	0	3	0	3	0	4	Yes.	No..	400	10,075	.....	29	737
15	8	0	0	0	0	0	4	0	0	No..	No..	.....	2,000	270	.....	738
6	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	739
30	35	0	0	0	0	0	0	10	6	No..	No..	0	4,010	715	450	740
18	30	0	0	0	0	4	5	0	0	No..	No..	0	2,000	600	500	741
60	103	3	3	.....	.....	0	0	3	9	Yes.	No..	2,000	50,500	27,020	372	742
17	30	0	0	.....	.....	0	0	1	2	No..	No..	100	8,000	1,131	600	743
20	15	0	0	3	2	10	8	.....	.....	No..	No..	0	2,000	300	.....	744
20	34	0	0	3	2	0	0	7	7	No..	No..	500	10,300	1,034	323	745
43	37	0	0	0	0	.....	.....	0	0	No..	No..	0	1,350	1,500	.....	746
5	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	747
35	44	0	0	.....	.....	.....	.....	0	0	No..	No..	105	4,000	1,800	100	748
18	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	670	749
12	2	0	0	12	2	.....	.....	0	0	Yes.	No..	4,000	4,000	3,000	.....	750
7	11	0	0	0	0	6	11	0	0	No..	No..	0	2,000	800	15	751
316	0	0	0	.....	.....	.....	.....	30	0	No..	No..	300	37,000	15,000	.....	752
3	19	0	0	.....	.....	.....	.....	0	0	.....	No..	16	20,000	.....	.....	753
14	8	0	0	3	2	3	0	0	0	Yes.	No..	.....	8,035	1,800	90	754
61	108	0	0	4	5	.....	.....	5	24	No..	No..	800	60,025	3,000	0	755
30	10	0	0	12	2	3	1	4	1	No..	No..	0	15,200	2,800	350	756
40	48	.....	.....	.....	.....	.....	.....	7	18	No..	No..	1,200	25,150	579	.....	757
18	69	.....	.....	.....	.....	.....	.....	2	14	No..	No..	300	40,100	12,000	200	758

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	KENTUCKY—cont'd.				
759	Shelbyville	High School (department)	B. P. Teris	1	3
760	Versailles	High School	John L. Patterson, A. M.	2	a3
	LOUISIANA.				
761	Donaldsonville	Ascension Academy	A. W. Meadows	1	a3
762	New Iberia	High School	W. M. Howe	1	1
763	New Orleans	McDonogh High School, No. 1.	Joseph V. Calhoun	6	0
764	....do	McDonogh High School, No. 2.	Mrs. M. Stamps	0	8
765	....do	McDonogh High School, No. 3.	Miss C. Hubbard	0	7
766	Sugartown	High School	M. E. Shaddock	2	2
	MAINE.				
767	Acton	High School	Harry L. Springer	1	0
768	Alfred	....do	Fred. W. Freeman	1	1
769	Auburn	....do			
770	Augusta	Cony High School	J. H. Parsons	2	2
771	Bangor	High School	Chas. A. Byram	2	6
772	Baring	....do	E. F. Bates	(1)	
773	Bath	....do			
774	Belfast	....do	F. W. Chase	1	2
775	Berwick	Sullivan High School	J. R. Perkins	1	2
776	Biddeford	High School	John P. Marston	3	3
777	Bowdoinham	....do	John A. Cone	1	1
778	Brewer	....do	Miss E. C. Abbot	0	2
779	Bridgton	....do	C. H. Wardwell	1	1
780	Brownsville	....do	Frank S. Hamlet	1	0
781	Brunswick	....do	Charles Fish	2	2
782	Buxton Center	....do	George H. Larrabee	1	1
783	Calais	....do	S. E. Webber	1	2
784	Camden	Megunticook High School	Ruel Robinson	1	1
785	Cape Elizabeth	High School	D. W. Hawkes	1	1
786	Caribou	....do	W. S. Knowlton, A. M.	1	1
787	Castine	....do	Miss R. E. McIntire	0	1
788	Charleston	Charleston Academy	W. J. Rideout	1	1
789	China	High School	N. A. Webb	1	1
790	Columbia Falls	....do	A. B. Cole	1	0
791	Cornish	....do	W. C. Whelden	1	1
792	Dennysville	....do	Miss L. B. Hatch	0	1
793	Dexter	....do	F. A. Spratt	1	1
794	Dresden	....do	Thomas C. Spillane	1	1
795	Eastport	Boynton High School	Preston I. Merrill	1	2
796	Ellsworth	High School	W. R. Whittle	1	2
797	Fairfield	....do	Geo. M. Hurd	1	0
798	Fort Fairfield	....do	Wm. L. Powers	2	2
799	Foxcroft	Foxcroft Academy	E. L. Sampson	1	1
800	Freeport	High School	W. B. Mitchell	1	1
801	Garland	....do	E. A. Bearce	0	2
802	Gorham	....do	W. W. Woodman	2	2
803	Greenville	....do	Charles Davidson, reporting officer.	1	0
804	Guilford	....do	Fred. F. Hayes	1	2
805	Hallowell	....do	R. H. Brainard	1	2
806	Harmony	....do	P. P. Beal	1	0
807	Hartford	....do	A. D. Park	1	1
808	Kennebunk	....do	John R. Clark	1	0
809	Lewiston	....do	Geo. B. Files	3	3
810	Limerick	....do	F. J. Allen	1	2
811	Lisbon	....do	D. L. Whitmarsh, A. B.	1	0
812	Livermore	....do	Everard C. Megquier	1	0
813	Livermore Falls	....do	E. B. Currier	1	3

a Also give instruction in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
15	6	0	0							No	No		$5,000		$400	759
13	8	0	0					0	0	No	No		15,000	$800		760
4	16	0	0	0	0	0	0	0	0	No	No	0	1,000	1,000		761
16	35	0	0	0	0	0	0	0	9	Yes	No	0	4,000			762
233	0	0	0					20	20	Yes	No	500	50,400			763
0	322	0	0					0	72	Yes	No	500	150			764
0	186	0	0	0	0	0	0	0	17	Yes	No	60	1,500			765
10	15	0	0	4	7	3	5	0	0	No	No	0	720	460		766
4	0	0	0	0	0			0	0	No	No	0	300	200		767
11	7	0	0	0	0	2	4	2	6	No	No	107	2,500	250		768
90	70															769
50	65	0	0	16	1	3	0	5	4	No	No	200	26,000	4,650	60	770
136	170	0	0	20	20	25	0	6	26	No	No	600			132	771
18	17			1	0	17	17			No	No		2,555	75	21	772
98	82															773
19	39	0	0	5	7			2	2	No	No	200	17,050	250	75	774
7	20	0	0	0	0			0	0	No	No	0	12,010	250	3	775
70	109	0	0	14	3	1	0	13	22	No	Yes	2,000	51,000		12	776
27	54	0	0							No	No		2,520	250		777
21	32	0	0	0	0	0	0	4	8	No	No	100	7,100	250	35	778
19	26	0	0	5	3	0	0	1	1	No	No	487	10,225	250		779
23	17	0	0	3	1	3	0	51	69	No	No	0	2,500	150		780
40	55	0	0	14	2	0	0	3	8	No	No	275	8,300	250	200	781
32	33	0	0	9	5	0	0	2	0	No	No	50	2,550	1,050	48	782
27	52	0	0	11	5	2	0	3	5	Yes	No	74	8,100	2,000		783
18	42	0	0	0	0	2	14	2	14	No	No	0	6,075	140	45	784
34	54	0	0					5	17	No	No	200	16,250	1,650		785
60	40	0	0	12	3	25	35	4	4	No	No	0	15,010	1,250	50	786
13	13	0	0	0	0	0	0	0	2	No	No	25	3,000			787
26	20	0	0	9	5	10	10	6	8	Yes	No	175	2,200	250	50	788
25	31	0	0	0	2	3	1	2	3	No	No	30	3,000	250	120	789
17	23	0	0	0	0	0	0	0	0	No	No	30		195	16	790
51	32	0	0	2	0	0	0	1	4		No	25	8,040	750	125	791
16	16	0	0	0	0	0	0	4	2	No	No	0	1,275	501	6	792
17	26	0	0	1	4	2	0	4	5	No	No	428	12,075	250	150	793
9	9	0	0	0	0	0	1			No	No	0				794
11	31	0	0	0	0	0	0	0	3	No	No	300	3,150	250		795
37	53	0	0	9	2	1	0	7	8	No	No	25	2,100	2,050	0	796
16	19	0	0	0	0	0	0	3	5	No	No		8,050	250	17	797
40	50	0	0	9	8	2	0			No	No	0	8,250	250	20	798
34	30	0	0	9	8			1	2	No	No	400	100	620	500	799
36	31	0	0	17	3			5	7	No	No	400	13,000	1,650	56	800
16	19	0	0	0	0	0	0			No	No	375	1,125	250		801
45	37	0	0	12	5	0	0	7	5	Yes	No	200		1,568	84	802
16	22	0	0	9	0	0	0	3	2	No	No	0	2,000	500	0	803
20	21	0	0	3	1	0	0	0	0	No	No	0	3,000	188	30	804
40	58	0	0	4	3	2	0	3	6	No	No	30	8,400			805
17	24	0	0	0	0	0	0	0	0	No	No	0		63		806
9	18	0	0	0	3	0	0	0	4	No	No	0	500	200	8	807
20	12	0	0	7	14	13	8	5	5	No	No	50	3,550	173	49	808
74	73	0	0	24	17	21	0	11	15	Yes	No	529	20,500	250	239	809
29	28	0	0	4	4	0	0	3	0	No	No	18	10	250	65	810
22	28	0	0	10	5	5	0	4	2	Yes	No	50	6,005	1,000	25	811
20	3	0	0	2	0			0	0	No	No	0		148	5	812
18	15	0	0	2	0	7	9	0	0	Yes	No	0	4,000	125		813

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	MAINE—continued.				
814	Machias	High School	A. J. Whitney	1	1
815	Machiasport	....do	J. A. Tuttle	1	0
816	Madison	....do	C. O. Small	1	1
817	Manchester	....do	Chas. W. Averill	1	0
818	Millbridge	....do	W. H. Dresser	1	0
819	Milo	....do	Frank S. Tolman	1	1
820	Monson	Monson Academy	A. W. Meserve	1	1
821	Mount Desert	High School	B. H. Winslow	1	1
822	Newport	....do	W. R. Jordan	1	2
823	New Portland	....do	F. J. C. Little	1	0
824	New Vineyard	....do	E. R. Luce, supervisor	1	0
825	North Anson	Anson Academy	F. G. Manson, A. M	1	5
826	North Berwick	High School	J. H. Maxwell	1	1
827	Norway	....do	M. H. Small	1	2
828	Oakland	....do	J. M. W. Moody	1	1
829	Orrington	....do	J. W. Philips, supervisor	1	0
830	Portland	....do	A. E. Chase	4	9
831	Princeton	....do	A. W. Sylvester	1	1
832	Richmond	....do	B. G. Shackelford	1	1
833	Rockland	....do	Jefferson Taylor	(3)	
834	Saccarappa	Westbrook High School	F. H. Nickerson	1	3
835	Samford	High School	Howard Perkins	1	0
836	Sebec and South Sebec.	Village High School and Sebec Corner High School.	Perkins & Stoddard	2	0
837	Shapleigh	High School	Miss Nellie Moore	1	2
838	Skowhegan	Bloomfield Academy and Skowhegan High School.	E. G. Walter	1	2
839	South China	Erskine School	W. J. Thompson	1	1
840	South Thomaston	High School	G. C. Horn, supervisor	1	0
841	Southwest Harbor	Tremont High School	C. E. Perkins	1	0
842	Stetson	High School	W. S. Townsend, supervisor.	1	1
843	Steuben	Union High School	D. Fletcher	1	0
844	Thomaston	High School	M. P. Smithwick	1	1
845	Thorndike	....do	Ross C. Higgins	4	6
846	Tremont	....do	W. R. Rich	1	0
847	Troy	....do	C. H. Johonnett	2	0
848	Turner	....do		4	0
849	Wales	....do	D. F. Bryant	1	9
850	Waterville	High School	Lincoln Owen	1	3
851	Wayne	Wayne and North Wayne Free High School.	Earle & Ford	1	1
852	West Poland	North Poland High School	F. P. Knight	1	1
853	West Sumner	High School	J. C. Parlin	1	0
854	Winthrop	....do	F. E. Russell	1	1
	MARYLAND.				
855	Berlin	Buckingham High School	W. Lee Carey	1	a6
856	Centerville	Centerville Academy	A. G. Harley, sr	2	0
857	Chance	Rock Creek High School	S. S. Handy	1	2
858	Clear Spring	High School (department)	J. B. Houser	2	2
859	Crisfield	High School	Frederick W. Sterling	1	0
860	Darlington	Academy and High School	A. F. Galbreath	1	1
861	East New Market	East New Market Academy	W. P. Beckwith	1	0
862	Easton	High School	E. D. Murdaugh	2	3
863	Elkton	Elkton Academy	Geo. A. Steele	1	1
864	Frederick	High School	Miss M. M. Robinson	0	1
865	Hagerstown	Female High School	Miss Annie G. Barkdoll	1	1
866	....do	Washington County Male High School.	George C. Pearson	2	0
867	Hancock	High School (department)	Willie M. Cross	1	0

a Also give instruction in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
21	26	0	0	3	2	.....	.....	4	5	No..	No..	280	$5,150	$250	$20	814
9	10	0	0	0	0	.....	.....	0	0	No..	No..	15	.....	.....	.....	815
23	31	0	0	0	0	5	8	2	2	No..	No..	0	2,500	438	44	816
25	25	0	0	0	0	.....	.....	4	8	No..	No..	0	2,015	150	.....	817
22	22	0	0	0	0	.....	.....	0	0	No..	No..	20	2,012	250	.....	818
8	14	.....	.....	1	2	3	0	4	3	No..	No..	.....	2,565	600	18	819
26	41	0	0	0	1	.....	.....	0	0	No..	No..	150	3,525	250	30	820
9	4	0	0	0	2	4	3	.....	.....	No..	No..	.....	15	175	.....	821
20	25	.....	.....	.....	.....	.....	.....	.....	.....	No..	No..	.....	8,000	.....	.....	822
20	20	0	0	4	4	3	3	4	4	No..	No..	0	2,005	250	.....	823
14	17	.....	.....	.....	.....	.....	.....	.....	.....	No..	No..	0	1,025	200	3	824
48	48	0	0	5	4	5	5	0	5	No..	No..	400	.....	250	600	825
24	21	0	0	6	7	.....	.....	0	0	No..	No..	0	3,050	250	.....	826
41	55	0	0	8	12	0	0	8	16	Yes.	Yes.	300	10,075	250	300	827
25	40	0	0	2	1	0	0	2	6	No..	No..	70	4,000	250	0	828
4	12	0	0	0	0	2	4	0	0	No..	No..	0	.....	137	.....	829
140	195	0	1	41	10	0	0	26	30	No..	No..	1,500	50,500	500	150	830
20	15	0	0	0	0	.....	.....	0	0	No..	No..	0	1,500	500	.....	831
15	17	.....	.....	1	0	1	0	2	1	No..	No..	300	30,150	950	285	832
43	84	0	0	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	833
56	60	0	0	10	3	.....	.....	9	10	Yes.	No..	.....	20,300	250	.....	834
15	14	0	0	0	0	.....	.....	.....	.....	No..	No..	0	15,000	125	.....	835
16	6	0	0	0	0	.....	.....	.....	.....	No..	No..	0	3,000	250	.....	836
11	13	.....	.....	9	1	.....	.....	2	1	No..	No..	300	2,600	250	8	837
25	75	0	0	1	3	2	11	4	14	No..	No..	300	10,500	800	300	838
23	32	0	0	0	0	0	0	0	0	No..	No..	300	2,000	117	215	839
8	13	0	0	0	0	0	0	1	7	No..	No..	0	500	125	.....	840
12	22	0	0	0	9	.....	.....	.....	.....	No..	No..	16	5,000	150	.....	841
15	13	0	0	0	0	6	2	0	0	No..	No..	0	1,000	88	.....	842
6	13	0	0	0	1	0	1	3	4	No..	No..	0	900	70	35	843
27	42	0	0	4	4	0	0	5	5	Yes.	No..	125	5,100	1,250	0	844
64	72	0	0	12	6	21	14	11	8	No..	No..	0	1,238	600	30	845
20	15	0	0	0	0	0	0	0	0	No..	No..	0	3,000	550	.....	846
17	28	0	0	0	0	0	0	2	4	No..	No..	0	2,500	150	.....	847
20	20	.....	.....	.....	.....	.....	.....	.....	.....	No..	No..	0	.....	.....	.....	848
19	22	0	0	0	0	0	0	.....	.....	No..	No..	0	351	100	.....	849
42	73	1	1	14	8	0	0	6	13	Yes.	No..	225	15,125	3,474	15	850
28	20	0	0	0	0	0	0	.....	.....	No..	No..	0	2,000	191	.....	851
25	20	0	0	0	0	0	0	0	0	No..	No..	0	6,100	250	.....	852
6	12	0	0	0	0	0	0	0	0	No..	No..	0	.....	100	.....	853
23	29	0	0	.....	.....	.....	.....	4	3	No..	No..	1,500	10,200	250	0	854
30	33	0	0	20	30	4	0	2	3	Ye .	No..	.....	10,100	5,000	.....	855
29	0	0	0	20	0	.....	.....	.....	.....	Yes.	No..	100	1,500	600	.....	856
11	16	0	0	1	0	0	0	.....	.....	No..	No..	20	.....	.....	.....	857
13	10	0	0	2	5	0	0	6	3	Yes.	No..	0	4,000	.....	.....	858
12	13	0	0	0	0	0	0	0	0	No..	No..	0	5,000	400	.....	859
26	14	.....	.....	2	4	.....	.....	6	5	No..	Yes.	12	4,570	400	.....	860
14	22	0	0	.....	.....	.....	.....	0	0	No..	No.	0	.....	229	.....	861
88	90	0	0	30	40	12	8	2	4	Yes.	No..	200	10,250	3,000	.....	862
31	23	0	0	3	2	.....	.....	.....	.....	No..	No..	.....	2,500	500	.....	863
0	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	864
0	43	0	0	0	0	.....	.....	0	10	Yes.	No..	.....	10,500	200	500	865
35	0	0	0	5	0	.....	.....	13	0	Yes.	No..	30	9,050	.....	450	866
14	22	0	0	2	3	7	8	2	3	Yes.	No..	3	8,000	.....	.....	867

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	MARYLAND—cont'd.				
868	Havre de Grace	Harford County High School and Academy.	R. W. Eubank	1	2
869	Laurel	High School	H. C. Schooly	1	3
870	Middletown	do	Wm. L. Avis	1	0
871	Pocomoke City	do	H. J. Handy	1	0
872	St. Michaels	do	Wm. C. Crouse	1	2
873	Sharpsburg	High School (department)	Jno. E. Wagaman	1	1
874	Smithburg	do	A. J. Harbaugh	1	3
875	Snow Hill	High School	Thos. H. Spence	2	4
876	Trappe	do	D. Melvin Long	1	0
877	Vienna	Vienna Academy	H. M. Strickler	2	1
878	Williamsport	High School	Jos. F. Kimler	2	0
	MASSACHUSETTS.				
879	Abingdon	High School	Miss Alice C. Jones	0	3
880	Adams	do	Charles N. Howe	3	2
881	Amesbury	do	A. E. Tuttle	1	2
882	Amherst	do	S. A. Sherman	2	2
883	Arlington	Cotting High School	A. G. Fisher	1	3
884	Athol	High School	W. J. Rushmore	1	1
885	Attleboro	do		(3)	
886	Ayer	do	F. U. Virmilie	1	1
887	Bedford	do	Miss Maud Wood	0	1
888	Belchertown	do	Chas. L. Reed	1	0
889	Belmont	do	H. H. Butler	1	1
890	Beverly	do	B. Sumner Hurd	1	5
891	Bolton	Houghton High School	E. B. Chamberlin	0	1
892	Boston	Girls' High School	John Tetlow	5	23
893	do	Public Latin School (Warren avenue).	Moses Merrill	16	0
894	do	Roxbury High School	Sam. M. Weston	2	9
895	Bourne	High School	Henry S. Bullen	1	1
896	Bradford	do	W. R. Jones	1	2
897	Braintree	do	C. E. Stetson	1	1
898	Bridgewater	do	Lewis T. McKenney	1	2
899	Brighton	do	Benj. Wormelle, master	2	2
900	Brockton	do	Edward Parker	3	3
901	Brookfield	do	Edw. B. Hale	1	2
902	Brookline	do	F. T. Farnsworth	2	2
903	Cambridgeport	Cambridge Latin School	Wm F. Bradbury	3	6
904	do	Cambridge English High School.	Frank A. Hill	4	11
905	Canton	High School	Edw. L. Underwood	1	1
906	Charlestown	do	J. O. Norris	2	4
907	Chatham	do	M. F. Daggett	1	0
908	Chelmsford	do	Miss S. M. Emerson	1	1
909	Chelsea	do		(9)	
910	Chicopee Falls	do	A. C. Russell	1	1
911	Clinton	do	A. E. Ford	1	3
912	Cohasset	do	Edward J. Cox	1	1
913	Concord	do	Wm. L. Eaton	1	4
914	Conway	do	Miss E. Hale	0	2
915	Danvers	Holton High School	H. R. Burrington	1	2
916	Dedham	High School	Carlos Slafter	2	4
917	Dorchester	do	Chas. J. Lincoln	2	5
918	Dover	Sanger High School	F. Smith, superintendent	0	1
919	Dudley	Nichols' Academy and Dudley High School.	Alfred G. Collins	2	2
920	East Boston	High School	John F. Eliot	2	3
921	East Bridgewater	do	G. F. Murdock	1	1
922	East Douglas	do	Thos. Tucker	1	0
923	Easthampton	do	L. E. Chapin	0	3
924	East Marshfield	Marshfield High School	Wm. G. Park	1	0
925	Everett	High School	R. A. Rideout	1	2

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
33	46	0	0	5	15	20	23	2	4	No..	No..	0	$15,100	$300	$720	868
11	19	0	0	7	12	4	6	2	7	Yes.	No..	0	3,500	2,410	.....	869
24	8	0	0	1	0	0	0	0	0	No..	No..	0	.....	459	261	870
11	31	0	0	0	0	0	0	0	4	No..	No..	0	6,000	.....	115	871
27	31	0	0	10	20	.....	.....	0	0	Yes.	No..	0	10,000	2,700	.....	872
43	55	0	0	0	0	0	0	3	4	Yes.	No..	0	4,000	2,250	.....	873
10	18	0	0	0	0	0	0	2	6	Yes.	No..	0	.....	.....	.....	874
5	15	0	0	3	2	.....	.....	0	4	No..	No..	200	7,500	.....	.....	875
17	18	0	0	0	0	0	0	0	0	Yes.	No..	100	900	.....	.....	876
10	17	0	0	3	5	0	0	0	2	No..	No..	150	1,000	300	.....	877
30	42	0	0	6	3	1	1	0	0	Yes.	No..	175	3,500	2,500	.....	878
34	34	0	0	1	0	0	0	6	2	Yes.	No..	100	10,000	.....	.....	879
34	48	0	0	0	5	0	0	3	8	No..	No..	40	18,300	79	70	880
40	70	0	0	3	3	4	0	4	17	Yes.	No..	100	8,150	60	0	881
35	85	0	0	18	18	1	3	3	9	No..	No..	350	10,025	.....	100	882
35	45	0	0	3	6	4	0	2	5	No..	No..	1,000	10,800	5,000	.....	883
20	25	.....	.....	1	6	0	0	3	4	No..	No..	.....	3,150	.....	.....	884
14	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	885
20	30	1	0	1	19	12	0	3	3	Yes.	No..	200	5,200	167	12	886
2	6	0	0	0	0	0	0	0	0	No..	No..	0	.....	.....	.....	887
21	26	0	0	0	0	0	0	2	3	No..	No..	0	.....	.....	.....	888
18	36	0	0	0	0	0	0	2	7	Yes.	No..	50	15,050	163	30	889
95	95	1	0	4	2	10	0	23	23	No..	No..	350	150,300	.....	240	890
8	21	0	0	0	0	0	0	0	.....	No..	No..	0	1,500	128	.....	891
0	649	.....	.....	.....	.....	.....	.....	0	193	No..	No..	2,500	1,000	.....	.....	892
506	0	3	0	506	0	.....	.....	38	0	No..	Yes.	4,050	629,300	47,887	3,200	893
128	204	0	0	0	0	0	0	20	46	Yes.	No..	1,000	.....	.....	.....	894
24	24	0	0	0	1	0	0	9	7	Yes.	No..	75	1,650	1,650	.....	895
33	40	0	0	5	3	.....	.....	2	0	Yes.	No..	.....	.....	.....	.....	896
33	48	0	0	0	0	.....	.....	4	19	Yes.	No..	0	.....	.....	.....	897
33	35	0	0	0	0	1	5	4	13	No..	No..	.....	10,300	2,700	.....	898
24	63	0	0	0	0	0	0	3	10	Yes.	Yes.	200	25,500	.....	.....	899
101	142	0	0	22	18	3	0	15	17	Yes.	No..	150	45,500	.....	36	900
24	41	0	0	3	1	0	3	0	5	No..	Yes.	100	10,100	170	24	901
44	71	0	0	6	10	11	0	6	4	Yes.	No..	600	30,500	.....	.....	902
123	102	3	0	120	98	.....	.....	13	7	No..	No..	500	31,000	.....	200	903
190	292	2	12	0	0	22	0	12	25	Yes.	No..	2,500	67,000	0	200	904
19	28	0	0	0	0	0	0	12	6	Yes.	No..	60	7,300	31	.....	905
66	136	2	0	0	0	5	0	9	41	Yes.	No..	3,000	76,000	.....	.....	906
7	26	0	0	1	0	1	0	0	1	No..	No..	0	2,550	3,500	.....	907
19	17	0	0	0	0	0	0	2	7	Yes.	No..	200	5,000	.....	.....	908
103	179	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	909
13	23	0	0	0	7	.....	.....	1	3	Yes.	No..	600	12,400	2,100	.....	910
52	63	0	0	6	8	3	0	13	13	Yes.	No..	300	60,500	200	.....	911
27	42	0	0	.....	.....	.....	.....	4	2	Yes.	No..	.....	10,150	.....	.....	912
60	60	0	0	15	5	2	0	11	9	Yes.	No..	.....	20,800	3,900	800	913
26	33	0	0	0	0	0	0	2	4	No..	No..	0	2,035	540	.....	914
56	73	0	0	0	0	2	0	12	15	Yes.	No..	30	14,100	3,065	50	915
50	70	.....	.....	8	4	.....	.....	6	10	Yes.	No..	200	30,800	.....	.....	916
99	136	0	0	0	0	0	0	20	24	Yes.	No..	2,000	102,000	.....	.....	917
8	7	0	0	0	0	0	0	0	0	Yes.	No..	30	2,500	.....	.....	918
30	45	0	0	3	2	4	0	3	2	Yes.	Yes.	2,120	106,000	1,000	480	919
55	64	0	0	0	0	2	0	14	15	Yes.	No..	384	60,300	.....	.....	920
27	46	0	0	0	0	0	0	3	7	Yes.	No..	300	8,200	.....	.....	921
8	21	0	0	0	4	0	0	2	6	No..	No..	150	3,050	166	82	922
10	27	0	0	0	5	3	1	3	3	Yes.	No..	.....	.....	15	393	923
8	18	0	0	.....	.....	.....	.....	0	0	.....	.....	.....	1,025	.....	.....	924
24	38	0	0	4	2	.....	.....	10	3	Yes.	No..	300	20,250	.....	.....	925

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	MASSACHUSETTS—continued.				
926	Fairhaven	High School	H. H. Tucker	1	1
927	Fall River	B. M. C. Durfee High School	Wm. H. Lambert	6	8
928	Fitchburg	High School	H. W. Kittredge	4	4
929	Foxboro	do	W. E. Horton	1	1
930	Framingham	Academy and High School	F. S. Hotaling	1	2
931	Franklin	High School	C. A. Brodeus	1	1
932	Georgetown	do	E. S. Fickett	1	1
933	Gloucester	do	A. W. Bacheler	2	8
934	Grafton	do	Wm. D. Baker	1	3
935	Great Barrington	do	E. E. Wentworth	1	1
936	Greenfield	do	W. H. Whiting	1	3
937	Groton	Butler High School	J. H. Manning	1	1
938	Groveland	High School	N. E. Adams	1	0
939	Hadley	Hopkins Academy	Elmer Case	1	2
940	Haverhill	High School	Clarence E. Kelley	2	6
941	Hingham Center	do	Jacob O. Sanborn	1	2
942	Hinsdale	do	J. F. Roache	1	0
943	Holbrook	do	John Haynes	1	1
944	Holden	do	Alonzo K. Learned	1	1
945	Holliston	do	Carl E. Holbrook	1	1
946	Holyoke	do	W. E. Judd	(6)	
947	Hopedale	do	Miss M. E. H. Barrows	0	2
948	Hopkinton	do	F. W. Alexander	1	1
949	Hudson	do	Walter H. Small	1	2
950	Huntington	do	John G. Fryer	1	0
951	Hyannis	Barnstable High School	C. D. Meserve	1	1
952	Hyde Park	High School	J. M. Hill	3	2
953	Jamaica Plain	West Roxbury High School	Geo. C. Mann	1	3
954	Lancaster	High School	Walter Mooers	1	3
955	Lee	do	Abner Rice	1	1
956	Leominster	Field High School	Joel D. Miller	2	3
957	Lexington	High School	J. Nelson Ham	1	2
958	Littleton	do	C. H. Harriman	1	1
959	Lowell	do	F. F. Coburn	3	11
960	Lynn	Classical High School	J. A. O'Keefe	6	10
961	do	English High School	Geo. H. Cary	2	2
962	Malden	High School	Geo. E. Gay	2	5
963	Mansfield	do	Fred. C. Hardon	1	1
964	Marblehead	do	Fred. S. Sawyer	1	2
965	Marlboro	do	Geo. H. Rockwood	1	4
966	Medford	do	L. L. Dame	3	5
967	Melrose	do	A. G. Whitman	2	4
968	Mendon	do	H. Whittemore	1	0
969	Merrimac	do	E. H. Brackett	1	1
970	Methuen	do	D. M. Spaulding	1	2
971	Middleboro	do	Walter Sampson	1	2
972	Milford	do	H. W. Lull	1	3
973	Millbury	do	S. J. Blaupied, A. M	1	2
974	Milton	do	Hiram Tuell	1	2
975	Nahant	do	C. L. Judkins	1	1
976	Needham	Kimball High School	Fred. L. Smith, A. M	2	1
977	New Bedford	High School	R. G. Huling, A. M	6	8
978	Newburyport	do	E. C. Adams, A. M	(5)	
979	Newtonville	Newton High School	E. J. Goodwin, master	6	10
980	North Adams	Drury High School	James F. Eaton	1	3
981	Northampton	High School	C. B. Roote	2	3
982	North Andover	Johnson High School	David Kinley	1	1
983	North Attleboro	High School	H. B. Nevens	1	3
984	Northboro	do	Albert Gray, jr	1	0
985	North Brookfield	do	W. A. Hoyt	1	1
986	North Dartmouth	Dartmouth High School	Job S. Gidley	1	0
987	North Easton	Easton High School	M. C. Lamprey	1	2
988	North Hanover	Hanover High School	Melvin S. Nash	1	1
989	North Reading	High School	Frank E. Sanborn	1	0
990	Norwell	do	Arthur O. Burke	1	0

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
20	30	0	0	0	0	.....	.....	4	5	No..	No..	50	$1,400	$500	.....	926
178	232	0	2	50	42	5	0	23	29	No..	Yes.	1,200	503,000	.....	$1,000	927
108	140	2	1	10	6	12	0	11	15	Yes.	No..	200	48,200	.....	400	928
30	30	0	0	3	1	1	0	4	4	No..	No..	50	20,125	.....	30	929
39	58	0	0	5	4	7	0	6	9	Yes.	No..	75	8,300	55	30	930
17	33	0	0	0	3	1	0	3	10	No..	No..	150	50	.....	.....	931
30	34	0	0	14	26	12	8	6	9	Yes.	No..	50	8,050	1,800	18	932
89	223	0	0	19	11	6	0	13	31	Yes.	.....	656	97,200	0	300	933
34	33	0	0	0	0	0	0	3	9	No..	No..	1,000	.....	.....	.....	934
21	39	1	2	0	0	0	0	2	3	No..	No..	50	7,[illegible]05	35	350	935
37	81	0	1	10	8	2	0	2	19	No..	No..	50	25,2[illegible]0	38	300	936
17	33	0	0	0	3	0	0	2	12	No..	No..	.....	35,050	.....	.....	937
18	19	.....	.....	.....	.....	0	0	2	1	No..	No..	20	3,700	1,100	.....	938
34	45	0	0	3	8	3	0	1	9	Yes.	No..	200	25	.....	.....	939
111	140	0	4	19	5	.....	.....	14	17	Yes.	No..	.....	111,200	.....	.....	940
43	61	0	0	2	0	4	0	7	16	Yes.	No..	0	21,000	.....	96	941
12	16	0	0	0	0	0	0	0	0	No..	No..	0	.....	.....	.....	942
30	38	0	0	0	0	0	0	0	3	No..	No..	50	8,200	2,000	.....	943
15	19	0	0	1	0	2	0	1	3	Yes.	No..	.....	40,200	.....	.....	944
12	23	0	0	3	0	2	0	5	7	Yes.	No..	.....	18,325	169	.....	945
94	128	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	946
23	11	0	0	3	2	0	0	2	3	Yes.	No..	200	8,300	209	272	947
25	31	0	0	4	5	2	0	8	4	No..	No..	120	5,150	1,800	.....	948
36	42	0	0	.....	.....	6	0	6	9	Yes.	No..	250	15,200	.....	120	949
15	10	0	0	.....	.....	.....	.....	.....	.....	No..	No..	.....	.....	.....	25	950
21	19	0	0	0	3	6	0	4	0	No..	No..	50	1,650	.....	30	951
68	128	2	1	6	5	3	0	5	15	No..	No..	65	150	.....	.....	952
26	73	0	0	.....	.....	.....	.....	4	15	Yes.	No..	800	50,500	.....	.....	953
29	34	.....	.....	2	6	27	28	2	7	Yes.	No..	125	15,250	170	50	954
34	45	0	0	9	4	2	5	6	6	Yes.	No..	100	5,500	2,300	200	955
.....	.....	0	0	2	0	3	0	4	13	No..	No..	0	40,000	.....	.....	956
43	36	0	1	7	4	2	0	4	7	No..	No..	100	12,500	3,000	.....	957
28	19	0	0	9	3	19	16	1	0	No..	No..	400	25	.....	.....	958
299	322	0	0	30	10	18	2	27	47	No..	No..	220	45,500	.....	600	959
174	236	1	3	65	60	10	0	18	44	Yes.	No..	100	20,600	.....	200	960
70	59	0	2	0	0	2	0	35	24	Yes.	No..	20	50	.....	.....	961
89	126	0	0	10	15	20	1	28	22	No..	No..	1,500	31,000	.....	300	962
22	30	0	0	0	0	1	0	14	4	No..	No..	0	25,050	169	.....	963
30	60	0	1	5	1	2	1	.....	.....	Yes.	No..	100	10,200	.....	.....	964
79	90	0	2	6	6	4	0	9	15	Yes.	No..	400	10,500	.....	.....	965
55	85	0	0	5	5	3	0	10	13	Yes.	No..	200	39,000	.....	.....	966
60	85	.....	.....	8	10	12	1	16	9	Yes.	No..	100	20,300	.....	.....	967
13	7	0	1	0	0	0	0	2	5	No..	No..	0	1,500	.....	.....	968
17	35	0	0	0	0	1	4	3	5	Yes.	No..	18	5,014	171	22	969
33	34	0	0	2	1	0	0	3	5	No..	No..	70	10,300	600	48	970
30	60	0	0	.....	.....	.....	.....	5	6	Yes.	No..	.....	30,100	185	113	971
75	98	.....	.....	4	6	.....	.....	8	10	No..	No..	300	10,150	56	.....	972
25	45	0	0	5	2	2	0	2	5	Yes.	No..	0	8,025	10,000	.....	973
35	30	1	0	4	2	4	0	5	10	Yes.	No..	200	20,500	3,600	.....	974
15	15	0	0	3	2	1	0	0	3	Yes.	No..	200	5,550	2,100	.....	975
22	35	0	0	4	2	1	0	3	7	No..	No..	350	18,150	.....	.....	976
138	206	5	7	20	8	4	0	15	44	Yes.	No..	5,280	130,000	.....	473	977
59	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	978
209	266	.....	.....	.....	.....	.....	.....	33	33	No..	No..	300	81,000	.....	.....	979
40	66	.....	.....	35	0	6	0	6	13	Yes.	No..	200	80,400	37,495	415	980
42	61	0	0	21	26	.....	.....	6	10	No..	No..	300	600	.....	120	981
14	24	0	0	0	6	3	0	1	3	Yes.	Yes.	80	20,450	.....	.....	982
28	63	0	0	3	13	2	2	0	13	Yes.	No..	125	12,100	.....	30	983
16	24	0	0	0	0	.....	.....	6	6	No..	No..	54	.....	1,500	100	984
22	14	0	1	10	4	2	1	4	0	Yes.	No..	175	15,200	8,888	.....	985
14	8	0	0	0	0	0	0	2	8	Yes.	No..	.....	1,200	600	.....	986
49	48	0	0	5	2	0	0	6	5	No..	No..	250	51,500	.....	45	987
28	29	1	0	0	0	0	0	3	6	Yes.	No..	50	5,025	1,258	.....	988
17	15	0	0	0	0	0	0	2	2	No..	No..	25	1,025	217	.....	989
12	22	0	0	0	0	0	0	.....	.....	No..	No..	0	1,525	.....	.....	990

TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	MASSACHUSETTS—continued.				
991	Norwood	High School	Wm. G. Goldsmith	1	1
992	Orange	do	Ira A. Jenkins	1	1
993	Oxford	do	Geo. A. Willey	1	1
994	Pepperell	do	Geo. W. Ransom	1	1
995	Pittsfield	do		(5)	
996	Plymouth	do	Miss Carrie E. Small	1	5
997	Randolph	Stetson High School	Hugh J. Molloy	1	2
998	Reading	High School	W. R. Butler	1	3
999	Rockland	do	Theo. P. Farr	1	2
1000	Rockport	do	W. C. Houghton	1	1
1001	Salem	Classical and High School	A. L. Goodrich	4	7
1002	Saugus	High School	Wilbur F. Gillette	1	1
1003	Saxonville	do	Chas. A. Guild	1	0
1004	Scituate	do	H. C. Macgowan	1	1
1005	Sherborn	Sawin Academy and Dowse High School.	Warren F. Gregory	1	1
1006	Shrewsbury	High School	H. K. Munroe	1	1
1007	Somerset	do	E. Homer Rice	1	0
1008	Somerville	do	Geo. L. Baxter	4	8
1009	Southboro	Peters High School	B. W. Tinker	1	1
1010	Southbridge	High School	F. E. Corbin	1	2
1011	South Hadley	do	Wm. P. Kelly	1	1
1012	South Weymouth	South High School	Edgar R. Downs	1	2
1013	Spencer	David Prouty High School	Edwin S. Pirrell, A. M	1	2
1014	Springfield	High School	W. W. Colburn	3	10
1015	Sterling	do	W. J. Merriman	1	1
1016	Stockbridge	Stockbridge High School and Williams Academy.	A. L. Hodges	1	1
1017	Stoneham	High School	J. W. MacDonald	1	2
1018	Stoughton	do	Wm. L. Burdick	1	2
1019	Stow	Hale High School	Geo W. Snow, A. B	1	0
1020	Sunderland	High School	D. F. Carpenter	1	0
1021	Sutton	do	Miss L. S. Taylor	0	1
1022	Swampscott	do	G. B. Balch	1	1
1023	Taunton	do	J. P. Swinerton	3	3
1024	Templeton	do	H. F. Lane	1	1
1025	Tewksbury Center	do	M. H. Jackson	1	0
1026	Townsend	do	A. T. Averill	1	0
1027	Uxbridge	do	Charles H. Bates	1	1
1028	Wakefield	do	C. T. C. Whitcomb	1	4
1029	Waltham	do	E. D. Russell	2	5
1030	Ware	do	Samuel W. Hallett	1	2
1031	Warren	do	Edward Ayres	1	1
1032	Watertown	do	G. R. Dwelley	3	1
1033	Wayland	Center High and Grammar School.	Chas. S. Hartwell	1	0
1034	Wellesley Hills	High School	Seldon L. Brown	2	3
1035	Wellfleet	do	J. A. Russell	1	1
1036	West Boylston	do	John C. Worcester	1	1
1037	Westfield	do	W. M. McLaughlin	5	3
1038	Westminster	do	Miss C. M. Deming	0	1
1039	West Newbury	do	Myron H. Goodwin, reporting officer.	1	0
1040	Weston	do	B. J. Hinds	1	1
1041	Westport Point	do	G. H. Eldridge	1	0
1042	West Springfield	do	F. W. Pease	1	2
1043	Whitinsville	do	S. A. Melcher	1	1
1044	Whitman	do	H. E. Henderson	1	3
1045	Williamstown	do	E. H. Botsford	1	1
1046	Wilmington	do	Walter I. Weeks	1	0
1047	Winchendon	do	F. M. Collester	3	3
1048	Winchester	do	E. W. Lovering	1	3
1049	Winthrop	do	E. R. Harding	1	1
1050	Woburn	do	Herbert B. Dow, A. M	2	3

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
18	27	0	0	3	5	----	----	0	2	No..	No..	79	$17,550	$1,809	-------	991
16	28	0	0	0	0	2	0	0	5	No..	No..	----	15,050	----	-------	992
9	17	0	0	0	0	----	----	2	8	No..	Yes.	245	1,150	----	-------	993
18	27	0	0	0	0	----	----	3	3	No..	No..	30	17,000	1,000	-------	994
74	110	----	----	----	----	----	----	----	----	----	----	----	----	----	-------	995
69	100	1	0	1	3	15	5	13	21	No..	No..	562	4,800	5,000	-------	996
16	32	0	0	5	10	0	0	3	9	Yes.	No..	75	15,300	2,000	----	997
39	62	0	0	2	5	1	0	3	9	No..	No..	197	6,350	----	648	998
47	50	----	----	6	4	2	0	4	17	Yes.	No..	94	6,200	----	90	999
23	37	0	0	5	9	8	2	3	4	----	No..	150	5,150	----	----	1000
155	147	0	1	47	58	25	0	20	22	No..	No..	1,181	21,000	----	1,120	1001
17	20	0	0	1	0	----	----	4	0	No..	No..	150	350	----	-------	1002
13	7	0	0	----	----	----	----	7	1	Yes.	No..	25	100	----	-------	1003
42	36	0	0	0	0	1	0	6	6	Yes.	No..	24	1,235	----	-------	1004
25	26	0	0	1	4	12	0	2	7	Yes.	No..	50	40,050	----	43	1005
10	23	0	0	0	0	0	1	1	6	No..	No..	160	10,140	1,200	-------	1006
19	15	0	0	0	0	----	----	0	0	Yes.	No..	333	6,060	165	20	1007
186	264	0	1	82	45	28	0	25	37	No..	No..	200	50,600	----	-------	1008
27	24	0	1	4	1	5	0	3	4	No..	No..	100	5,100	----	-------	1009
34	45	----	----	7	13	----	----	1	7	No..	No..	67	30,285	----	-------	1010
12	26	----	----	0	2	----	----	0	3	No..	Yes.	20	20	----	15	1011
31	61	0	0	0	4	0	0	0	5	Yes.	No..	1,000	100	----	-------	1012
50	58	0	0	8	2	3	0	6	8	No..	No..	40	58,600	----	-------	1013
138	207	0	2	----	----	----	----	17	27	No..	No..	----	171,000	----	535	1014
23	18	0	0	0	0	----	----	----	----	Yes.	No..	50	3,075	30	20	1015
15	14	0	0	0	0	0	0	1	2	No..	No..	100	10,020	----	-------	1016
25	46	0	0	5	10	3	6	9	8	Yes.	No..	450	60,500	----	-------	1017
21	46	0	0	----	----	10	25	0	1	Yes.	Yes.	400	15,500	----	-------	1018
21	21	0	0	1	1	0	0	3	0	No..	No..	25	3,075	----	-------	1019
5	6	0	0	----	----	6	2	2	2	No..	No..	0	----	----	-------	1020
15	12	0	0	1	5	----	----	2	2	No..	No..	----	4,050	174	-------	1021
20	43	0	0	0	2	2	0	2	2	Yes.	No..	----	10,025	12	-------	1022
106	143	0	0	21	6	4	0	10	30	No..	No..	150	75,700	----	225	1023
28	25	0	0	1	0	0	0	4	2	Yes.	No..	0	50	----	20	1024
5	10	0	1	0	0	----	----	0	0	Yes.	No..	25	15	----	-------	1025
7	24	0	0	0	0	0	0	4	5	No..	No..	80	4,025	250	-------	1026
22	23	0	0	0	1	----	----	0	7	Yes.	No..	200	100	----	6	1027
40	69	0	0	7	11	5	0	8	13	Yes.	No..	2,000	41,500	55	65	1028
96	111	0	0	23	22	24	2	20	32	Yes.	No..	225	44,800	----	400	1029
25	40	0	0	4	12	16	28	2	8	Yes.	No..	100	200	----	100	1030
21	22	0	0	1	0	----	----	1	1	No..	No..	25	20,100	----	-------	1031
29	65	0	0	6	3	5	0	6	7	Yes.	No..	437	42,000	----	-------	1032
9	11	0	0	1	0	0	0	0	0	Yes.	No..	50	3,000	----	-------	1033
31	55	0	0	1	15	7	0	3	10	Yes.	No..	100	5,100	4,000	-------	1034
34	24	0	0	----	----	----	----	3	11	No..	No..	----	----	----	-------	1035
12	24	0	0	5	5	0	0	2	7	Yes.	No..	390	5,200	171	30	1036
73	102	0	1	----	4	3	2	6	12	No..	No..	300	100,500	----	280	1037
12	30	0	0	0	0	----	----	1	6	No..	No..	0	4,000	----	-------	1038
19	18	0	0	1	0	0	0	2	2	No..	No..	163	1,050	800	-------	1039
18	15	0	0	0	0	0	0	----	----	Yes.	No..	25	5,075	159	-------	1040
11	12	1	1	0	0	----	----	----	----	No..	No..	0	----	----	-------	1041
40	47	0	0	8	4	----	----	5	9	No..	No..	----	300	----	-------	1042
17	15	0	0	0	0	2	0	4	2	Yes.	No..	60	55,500	1,300	60	1043
40	55	0	0	3	4	2	0	1	7	Yes.	No..	50	12,300	700	64	1044
11	22	6	6	6	1	6	0	2	4	Yes.	No..	----	18,050	----	-------	1045
11	18	0	0	0	0	----	----	3	6	No..	No..	0	9,000	1,000	-------	1046
40	42	0	0	3	4	3	0	5	7	Yes.	Yes.	250	127,000	----	240	1047
34	28	0	0	9	10	4	0	4	7	Yes.	No..	1,600	15,500	----	15	1048
14	23	0	0	0	1	5	7	2	4	Yes.	No..	----	100	----	-------	1049
63	75	0	0	7	12	0	0	14	16	No..	No..	1,200	35,500	----	120	1050

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	MASSACHUSETTS—continued.				
1051	Worcester	High School	Alfred S. Roe	9	16
1052	Wrentham	do	E. J. Whitaker	1	1
1053	Yarmouth Port	do	Winfield S. Rich	1	1
	MICHIGAN.				
1054	Adrian	High School	A. E. Curtis	2	4
1055	Albion	do	C. B. Robertson	1	4
1056	Alpena	do	G. A. Hunt	(4)	
1057	Ann Arbor	do	J. G. Pettingill	8	7
1058	Bad Axe	do	Lyman W. Bacon	1	3
1059	Bancroft	do	G. R. Brandt	1	3
1060	Battle Creek	do	Frank Muir	2	a48
1061	Bay City	do	F. D. Sherman	3	7
1062	Belleville	do	E. R. Nethercott	2	1
1063	Berrien Springs	do	Lillie B. Howe	0	5
1064	Big Rapids	do	S. W. Baker, superintendent.	(4)	
1065	Blissfield	High School (department)	William H. Maybee	1	3
1066	Brighton	do	A. V. Sunderlin	1	4
1067	Brooklyn	do	—— Wing	2	2
1068	Byron	do	F. W. French	1	2
1069	Cadillac	do	E. P. Church, superintendent.	1	2
1070	Calumet	High School	C. H. Burgess	2	0
1071	Caro	do	Miss Emily Fuller	0	3
1072	Carson City	High School (department)	A. L. Bemis	1	65
1073	Cassopolis	High School	George M. Fisk	1	7
1074	Cedar Springs	High School (department)	E. J. Quackenbush	1	5
1075	Champion	High School	J. B. Montgomery	3	0
1076	Cheboygan	do	Miss Libbie C. Hamilton	1	1
1077	Chelsea	do	A. A. Hall	1	1
1078	Clarkston	do	Abram L. Craft	1	2
1079	Coldwater	do	H. A. Sober	4	2
1080	Concord	High School (department)	Frank W. Wells, superintendent.	1	1
1081	Corunna	do	J. W. Cupples	1	1
1082	Covert	do	Gail Finch	0	4
1083	Crystal Falls	High School	Amelia Blasdell	0	2
1084	Dansville	do	Charles E. Linabury	1	0
1085	Detroit	do		8	23
1086	Dexter	High School (department)	E. D. Walker	1	1
1087	Douglas	do	James Warnock	1	3
1088	Dundee	do	W. E. Lewis	1	1
1089	Eaton Rapids	High School	E. L. Evans	1	2
1090	Edmore	do	A. H. Demoray	1	3
1091	Edwardsburg	do	Edmund Schortzow	1	3
1092	Escanaba	do	Kirk Spoor	1	1
1093	Essexville	High School (department)	Jonathan Cook	1	3
1094	Evart	High School	Jos. H. Thompson	1	1
1095	Fenton	do	E. D. Watkins, superintendent.	2	1
1096	Flat Rock	High School (department)	T. Dale Cooke	1	2
1097	Flint	High School	Louis B. Lee	2	6
1098	Fremont	High School (department)	Francis Stillson	1	0
1099	Galesburg	do	W. C. Conkling	2	0
1100	Gaylord	do	Geo. E. Hancorne	2	2
1101	Grand Haven	High School	Miss Lora A. Smith	1	3
1102	Grand Ledge	do	J. L. Wagner	1	3
1103	Grand Rapids	High School (central)	W. A. Greeson	4	11
1104	do	Union High School	I. W. Barnhard	1	5
1105	Grass Lake	do	Geo. Fowler	1	5
1106	Hadley	High School (department)	R. Patrick	1	2

a Also give instruction in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
345	356	2	4	114	60	100	0	48	56	No..	No..	2,000	$168,173	.....	$70	1051
18	20	0	0	0	2	0	0	3	3	No..	No..	21	15,500	.....	.....	1052
22	20	0	0	0	0	2	0	3	1	Yes.	No..	1,090	2,525	.....	.....	1053
58	94	.....	.....	1	1	3	5	4	6	Yes.	No..	8,322	75,300	$22,603	405	1054
68	81	1	0	.....	.....	.....	.....	8	13	No..	Yes.	1,000	50,300	10,000	495	1055
32	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1056
339	305	5	3	128	72	135	155	49	34	No..	Yes.	3,500	101,500	.....	6,452	1057
16	22	0	0	.....	.....	.....	.....	0	3	Yes.	No..	0	5,075	429	16	1058
8	16	0	0	0	0	0	0	0	0	No..	No..	58	7,000	228	98	1059
50	100	2	2	1	2	4	6	8	10	Yes.	No..	10,000	200,500	40,000	20,000	1060
100	202	2	2	.....	.....	.....	.....	9	23	Yes.	No..	.....	206,000	71,303	187	1061
40	37	0	1	4	2	6	1	5	9	No..	No..	110	250	.....	240	1062
14	11	0	0	.....	.....	.....	.....	1	0	No..	No..	244	9,000	151	20	1063
25	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1064
37	45	0	0	2	0	0	2	1	1	No..	No..	161	3,600	350	117	1065
48	52	0	0	0	0	.....	.....	3	10	No..	No..	50	20,100	300	300	1066
40	45	.....	.....	.....	.....	.....	.....	4	5	Yes.	Yes.	200	7,100	317	211	1067
32	38	0	0	.....	.....	.....	.....	.....	.....	No..	No..	.....	2,505	207	145	1068
24	40	0	0	0	1	15	18	1	6	No..	No..	600	2,500	.....	32	1069
7	85	0	0	0	0	2	0	0	10	Yes.	No..	1,200	14,300	3,250	.....	1070
33	44	0	0	4	2	5	3	2	3	No..	No..	480	2,850	758	330	1071
20	25	0	0	0	0	0	0	.....	.....	No..	No..	12	15,075	200	75	1072
47	40	6	9	3	0	.....	.....	8	8	No..	No..	200	30,200	200	.....	1073
21	23	0	0	1	1	4	2	2	5	Yes.	No..	250	25,010	532	132	1074
9	15	0	0	0	0	0	0	4	3	Yes.	No..	1,000	.....	250	.....	1075
10	30	0	0	0	0	0	0	2	2	Yes.	No..	0	10,000	.....	30	1076
30	42	0	0	1	1	9	6	2	1	Yes.	No..	386	7,220	368	337	1077
24	27	0	0	0	0	0	0	1	7	No..	No..	0	3,000	538	132	1078
62	91	0	0	.....	.....	.....	.....	5	8	No..	No..	.....	.....	.....	.....	1079
18	26	0	0	.....	.....	.....	.....	2	6	No..	No..	0	10,000	.....	200	1080
21	42	0	0	1	8	11	34	3	6	No..	No..	1,300	50,300	.....	120	1081
12	28	5	6	0	0	0	0	1	3	No..	No..	0	1,400	.....	.....	1082
9	16	1	0	.....	.....	0	3	0	2	No..	No..	450	8,000	.....	.....	1083
12	11	0	0	0	0	2	4	1	2	No..	No..	137	7,700	120	91	1084
419	623	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1085
12	23	1	1	0	0	3	2	.....	.....	No..	No..	0	18,150	443	270	1086
40	44	0	0	3	2	6	0	3	11	No..	No..	333	6,000	.....	140	1087
40	25	0	0	.....	.....	4	2	2	2	Yes.	No..	300	30,025	.....	125	1088
65	48	3	2	0	0	.....	.....	3	4	No..	No..	100	2,700	453	325	1089
18	24	1	0	0	0	.....	.....	0	0	Yes.	No..	110	3,500	340	15	1090
21	17	0	0	0	0	.....	.....	0	0	No..	No..	.....	3,100	476	63	1091
28	31	1	2	.....	.....	.....	.....	3	3	Yes.	No..	1,200	50,175	1,740	.....	1092
20	25	0	0	0	0	.....	.....	0	0	No..	No..	0	8,150	2,600	.....	1093
21	40	0	2	.....	.....	.....	.....	.....	.....	Yes.	No..	400	16,150	3,400	70	1094
47	34	0	0	1	3	2	3	3	3	No..	No..	500	51,000	6,972	128	1095
30	25	2	1	2	3	7	7	2	4	No..	No..	500	1,500	338	360	1096
.....	.....	0	2	8	5	.....	.....	9	21	No..	No..	300	120,500	32,372	1,148	1097
15	32	0	0	0	0	7	12	0	0	No..	No..	25	10,000	500	50	1098
32	38	0	0	0	0	0	0	.....	.....	Yes.	No..	240	10,050	.....	380	1099
30	15	0	0	3	3	2	4	.....	.....	Yes.	No..	10	10,025	.....	30	1100
25	33	0	0	.....	.....	15	10	2	3	No..	No..	2,100	35,800	1,711	21	1101
27	20	0	0	0	0	.....	.....	3	3	No..	No..	310	25,100	.....	160	1102
253	330	1	3	0	0	.....	.....	20	29	No..	Yes.	1,032	91,500	.....	868	1103
68	116	0	1	1	1	5	0	.....	.....	Yes.	No..	400	70,000	.....	296	1104
47	48	4	3	26	21	.....	.....	4	6	Yes.	No..	501	10,200	1,880	400	1105
37	30	0	0	.....	.....	.....	.....	1	1	Yes.	No..	1,262	3,100	169	289	1106

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	MICHIGAN—cont'd.				
1107	Hancock	High School	H. Z. Brock	1	1
1108	Hanover	High School (department)	L. E. Miller	1	3
1109	Hart	Union School	F. E. Young	1	4
1110	Hastings	City School	Wellington D. Sterling	2	1
1111	Hersey	High School	B. E. Scott	2	1
1112	Hesperia	High School (department)	Well S. Millard	1	3
1113	Hillsdale	do	S. J. Gier	3	1
1114	Holly	High School	S. B. Wood	1	6
1115	Homer	do	W. F. Mercer	1	5
1116	Horton	do	F. W. Wheaton	1	2
1117	Houghton	do	F. W. Arbury	2	1
1118	Howard City	do	Geo. D. Papson	1	4
1119	Howell	do	W. H. Hawkes, superintendent.	1	2
1120	Hubbardston	High School (department)	Eugene Straight	1	2
1121	Imlay	do	G. H. Broesamble	1	1
1122	Ionia	High School	Miss J. A. Williams	3	4
1123	Iron Mountain	do	Miss Flora Wilber	1	2
1124	Iron River	do	M. R. Parmelee	1	3
1125	Jackson	High School, district No. 1	Elmer E. Brown	1	5
1126	do	High School, district No. 17	Lada Wilson	1	2
1127	Jonesville	High School	J. N. Mead	1	1
1128	Kalamazoo	do	S. O. Hartwell	1	7
1129	Lake Linden	do	C. G. White	1	2
1130	Lakeview	do	W. H. Davis	1	0
1131	L'Anse	do	C. E. Tuck	1	0
1132	Lansing	do	O. H. Carson	3	5
1133	Lawton	do	W. D. Hill	1	1
1134	Litchfield	do	W. H. French	1	1
1135	Lowell	do	C. S. Larzelere	1	1
1136	Ludington	do	Mrs. Van Laird	1	3
1137	Luther	High School (department)	Evan Essery	1	1
1138	McBride's	do	C. E. Peabody	1	2
1139	Manchester	do	G. W. Loomis	1	1
1140	Manistee	High School	—— Whitehead	1	3
1141	Manton	do	Wm. A. Hearn	1	0
1142	Marine City	do	Elmer Fisher	1	2
1143	Marlette	do	H. W. McArdle	1	3
1144	Marquette	do	Wm. McCracken	1	3
1145	Marshall	do	W. E. Goddard, A. B	3	2
1146	Mayville	do	E. D. Dimond	2	2
1147	Memphis	do	F. H. Sooy	1	3
1148	Menominee	do	Miss M. F. Stringham	0	3
1149	Midland	do	F. E. Stroup	1	1
1150	Milan	do	G. A. Dennison	1	1
1151	Milford	do	A. P. Cook	1	1
1152	Monroe	do	Walter Dennison	3	4
1153	Montague	High School (department)	Jas. C. Bryant	1	1
1154	Morrice	High School	—— Slack	1	0
1155	Mount Pleasant	do	James L. Skinner	1	a11
1156	Muskegon	do	J. H. Sheffield	1	2
1157	Napoleon	do	W. W. Armstrong	1	2
1158	Nashville	High School (department)	O. M. McLaughlin	0	1
1159	Negaunee	High School	F. D. Davis, superintendent.	(3)	
1160	Newaygo	do	Joseph Biscomb	1	1
1161	Niles	do	L. H. Stewart	1	2
1162	Northport	do	Miss Eva Smith	1	2
1163	Northville	High School (department)	J. A. Sinclair	1	1
1164	Norway	High School	S. B. Tobey	1	1
1165	Otsego	do	G. A. Oringa	1	1
1166	Ovid	do	E. M. Plunkett	1	1
1167	Owosso	do	H. H. Frost	2	4

a Also give instructions in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
19	31	0	0	.....	.....	.....	.....	6	7	Yes.	No..	800	$30, 250	$12, 000	$299	1107
20	18	.....	.....	.....	.....	.....	.....	2	4	Yes.	No..	253	50	.....	.....	1108
15	18	0	1	2	7	8	10	2	4	No..	No..	542	3, 200	361	156	1109
.....	.....	0	0	0	0	5	3	13	10	Yes.	No..	1, 250	40, 220	10, 129	778	1110
20	22	0	0	0	0	3	0	0	0	No..	No..	0	4, 020	.....	10	1111
6	15	0	0	.....	.....	2	1	.....	.....	No..	No..	33	3, 700	134	23	1112
56	83	.....	.....	.....	.....	.....	.....	.....	.....	Yes.	No..	.....	300	.....	417	1113
40	47	0	3	1	2	.....	.....	2	1	Yes.	No..	135	15, 100	950	205	1114
35	20	.....	.....	.....	.....	.....	.....	1	1	No..	No..	223	15, 100	830	155	1115
15	25	0	0	0	0	.....	.....	0	0	No..	No..	.....	3, 010	.....	.....	1116
6	15	.....	.....	3	0	3	0	3	3	Yes.	No..	1, 200	37, 500	13, 054	175	1117
11	11	0	0	.....	.....	.....	.....	.....	.....	No..	.....	96	50	.....	.....	1118
30	43	2	4	.....	.....	.....	.....	.....	.....	Yes.	No..	.....	65, 460	.....	300	1119
24	26	0	0	2	1	.....	.....	2	0	No..	No..	53	6, 025	.....	93	1120
9	16	0	0	.....	.....	.....	.....	1	5	No..	No..	255	10, 075	530	173	1121
66	76	1	0	10	10	20	20	4	10	Yes.	Yes.	500	6, 500	1, 742	1, 062	1122
6	19	0	0	2	0	0	0	2	2	No..	No..	1, 000	25, 150	.....	.....	1123
9	18	0	0	0	0	.....	.....	0	0	Yes.	No..	.....	.....	.....	.....	1124
94	148	0	0	7	9	18	25	13	14	Yes.	Yes.	1, 500	27, 500	.....	855	1125
40	65	0	0	0	0	30	40	2	5	No..	No..	250	25, 300	14, 000	75	1126
35	35	0	0	2	2	5	4	1	3	No..	No..	.....	25, 500	.....	250	1127
95	171	2	1	2	4	1	0	6	15	No..	No..	375	36, 000	.....	500	1128
22	49	0	0	0	0	10	6	3	5	No..	No..	400	18, 500	5, 020	.....	1129
28	34	0	0	0	0	.....	.....	2	4	Yes.	No..	57	3, 000	.....	75	1130
21	23	0	0	0	0	.....	.....	0	7	Yes.	No..	400	10, 000	.....	.....	1131
74	149	1	0	.....	.....	.....	.....	3	6	No..	No..	6, 289	30, 100	5, 000	309	1132
16	24	0	0	.....	.....	.....	.....	.....	.....	No..	No..	25	15, 050	.....	150	1133
14	16	0	0	0	0	.....	.....	4	3	Yes.	No..	75	9, 100	.....	210	1134
30	67	0	0	0	0	0	0	0	3	No..	No..	2, 235	14, 035	999	253	1135
29	49	0	0	0	0	3	0	3	3	No..	No..	2, 200	65, 400	3, 040	140	1136
12	33	0	0	0	0	1	0	1	3	No..	No..	175	6, 225	367	200	1137
8	6	0	0	0	0	0	0	6	3	No..	No..	12	2, 060	367	6	1138
27	30	1	0	.....	.....	.....	.....	2	7	No..	No..	40	5, 300	.....	284	1139
50	90	.....	.....	4	0	3	0	6	17	No..	No..	500	75, 500	.....	160	1140
13	24	0	0	1	.....	1	.....	1	1	Yes.	No..	0	10, 117	409	60	1141
18	17	0	0	0	1	0	2	0	0	No..	No..	520	18, 100	.....	.....	1142
48	54	0	0	.....	.....	.....	.....	0	0	No..	No..	60	2, 010	.....	70	1143
22	51	0	2	1	4	0	1	4	8	No..	No..	.....	.....	.....	.....	1144
36	48	0	0	10	10	10	20	2	6	No..	No..	1, 013	100, 500	13, 986	385	1145
31	42	0	0	3	.....	2	.....	4	10	No..	No..	200	9, 050	.....	250	1146
27	24	0	0	1	.....	2	.....	0	2	No..	No..	314	3, 100	97	73	1147
40	49	0	0	0	1	0	3	5	6	No..	No..	200	200	.....	10	1148
22	26	3	2	.....	.....	.....	.....	2	2	Yes.	No..	1, 300	37, 200	5, 200	89	1149
20	14	0	0	.....	3	.....	6	0	2	No..	No..	600	4, 350	389	75	1150
32	32	1	1	1	1	3	0	6	6	No..	No..	59	16, 075	550	423	1151
46	52	0	1	5	4	3	5	3	5	No..	No..	2, 642	37, 150	2, 280	596	1152
.....	.....	0	2	0	0	0	0	1	5	No..	No..	110	.....	.....	119	1153
.....	.....	0	0	0	.....	0	.....	1	7	No..	No..	50	.....	.....	50	1154
17	32	1	2	.....	8	.....	14	1	5	Yes.	No..	360	20, 100	1, 960	103	1155
50	130	0	0	1	25	1	39	12	18	Yes.	No..	500	15, 500	.....	48	1156
10	18	0	0	0	0	0	0	0	3	Yes.	No..	.....	7, 000	.....	.....	1157
40	60	0	0	4	10	4	10	3	5	Yes.	Yes.	.....	20, 100	.....	250	1158
35	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1159
12	16	4	2	2	2	6	0	.....	.....	No..	No..	100	10, 150	4, 000	.....	1160
26	56	0	1	0	3	2	2	2	10	No..	No..	1, 443	200	.....	142	1161
25	26	.....	.....	.....	.....	5	6	0	0	Yes.	No..	109	2, 050	.....	35	1162
24	30	1	0	.....	.....	.....	.....	1	1	Yes.	No..	1, 500	13, 150	.....	300	1163
16	23	.....	.....	3	4	13	19	1	0	Yes.	No..	789	4, 750	8, 500	.....	1164
24	49	0	0	2	3	0	0	0	0	No..	No..	400	10, 200	1, 164	532	1165
29	29	0	1	0	0	0	10	3	2	No..	No..	93	3, 170	5, 529	215	1166
50	80	2	0	4	5	6	0	2	6	No..	No..	600	80, 300	.....	300	1167

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondar," instructors.	
				Male.	Female.
	1	2	3	4	5
	MICHIGAN—cont'd.				
1168	Palo	High School	Frank W. Braley	1	2
1169	Parma	do	Geo. Turk	2	3
1170	Pentwater	High School (department)	C. W. Hills	1	1
1171	Perry	High School	H. J. McEuen	1	1
1172	Petersburg	do	M. L. Smith, jr	1	3
1173	Plainwell	High School (department)	L. E. Irland	1	3
1174	Pontiac	High School	O. C. Seelye, superintendent.	3	3
1175	Port Austin	do	Mrs. T. Dorland Brown	0	3
1176	Port Hope	do	Miss A. L. Rollin	0	a3
1177	Port Huron	do	J. H. Beazell	1	3
1178	Reading	do	Geo. A. McGee	1	0
1179	Richmond	High School (department)	R. J. Crawford	1	3
1180	Saginaw (east side)	High School		3	7
1181	Saginaw (west side)	do		1	5
1182	St. Clair	do	J. C. Shattuck	1	2
1183	St. Louis	do	W. A. Weeks	1	1
1184	Saline	High School (department)	M. J. Reed	1	1
1185	Sand Beach	High School	E. E. Ferguson	1	1
1186	Saugatuck	High School (department)	E. G. Trowbridge	1	0
1187	Schoolcraft	High School	C E. Smith	1	2
1188	South Haven	High School (department) District No. 1.	A. D. DeWitt	1	1
1189	Spring Lake	High School	Miss C. Van Der Veen	1	1
1190	Springport	High School (department)	Fred. M. Harlow	1	2
1191	Stanton	do	G. V. T. Comstock	0	2
1192	Unionville	High School (department)	Daniel Dickson	1	2
1193	Vandalia	High School	Chester E. Cone	1	3
1194	Vassar	do	Ira L. Forbes	1	1
1195	Vermontville	do	F. D. Smith	1	0
1196	Vernon	High School (department)	David G. Keys	1	1
1197	Vicksburg	do	W. E. Ransom	1	1
1198	Wayland	do	Wm. McNamara	1	1
1199	Wayne	High School	E. F. Gee	1	1
1200	West Bay City	do	Miss Stella Thorp	1	3
1201	Whitehall	High School (department)	C. M. McLean	2	1
1202	Williamston	High School	G. C. Lawrence	1	1
1203	Wyandotte	do	M. L. Palmer	1	1
1204	Yale	High School (department)	Lynn H. Peck	1	1
1205	Ypsilanti	High School	J. H. Hopkins	2	2
1206	Zilwaukee	High School (department) district No. 1.	M. E. Stafford	3	a2
	MINNESOTA.				
1207	Albert Lea	High School	W. J. Schmitz	1	3
1208	Alexandria	do	J. E. Manchester	1	3
1209	Anoka	do	M. A. Stone	1	2
1210	Appleton	do	F. G. Holmes	1	1
1211	Blue Earth City	do	F. J. Bomberger	2	0
1212	Brown's Valley	do	F. M. Richardson	1	2
1213	Cannon Falls	do	Otis C. Gross	1	1
1214	Chatfield	do	Lela M. Klampe	0	2
1215	Crookston	do	John Moore	2	0
1216	Detroit	do	B. F. Buck	1	1
1217	Dodge Center	High School (department)	J. C. Marshall		1
1218	Duluth	High School	E. T. Critchett	2	5
1219	Elk River	do	Thomas F. Moran	1	1
1220	Fairmont	do	Wm. P. Milliken, jr	1	2
1221	Faribault	do	G. R. Simpson	2	2
1222	Farmington	do	B. M. Lawrence	1	1
1223	Fulda	High School of Independent district No. 18.	A. W. Tierney	1	2
1224	Garden City	High School	Mrs. M. D. Church	1	2

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students whograduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
20	30	.....	.....	.....	.....	.....	.....	3	4	No..	No..	106	$4,000	$811	$152	1168
26	32	1	0	.....	.....	.....	.....	5	8	No..	No..	295	30,075	.....	365	1169
16	33	1	1	.....	3	3	5	4	5	No..	No..	300	15,050	.....	40	1170
32	37	0	0	2	0	.....	.....	1	3	No..	No..	30	4,040	227	180	1171
13	18	0	0	0	0	.....	.....	.....	.....	No..	No..	0	6,131	240	19	1172
30	44	0	0	.....	.....	.....	.....	0	6	No..	No..	264	12,100	4,200	301	1173
44	77	.....	.....	.....	.....	.....	.....	4	11	No..	No..	1,378	100,500	17,210	610	1174
16	11	0	0	1	1	0	0	2	4	No..	No..	250	5,000	212	0	1175
3	0	0	0	0	0	0	0	2	2	No..	No..	35	.....	.....	.....	1176
31	77	0	0	3	2	.....	.....	2	4	No..	No..	1,600	26,000	.....	68	1177
22	41	0	0	.....	.....	0	0	0	4	No..	No..	50	8,030	260	65	1178
20	27	0	0	2	3	3	5	3	1	Yes.	No..	300	8,500	500	300	1179
126	192	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1180
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1181
11	35	1	1	.....	.....	5	4	1	2	No..	No..	625	35,150	9,071	91	1182
19	47	.....	.....	.....	.....	.....	.....	1	0	Yes.	No..	200	12,200	.....	165	1183
1	24	.....	.....	.....	.....	4	5	2	5	No..	No..	430	6,500	.....	.....	1184
8	22	0	0	4	2	3	12	1	4	Yes.	No..	158	5,350	3,125	69	1185
3	8	0	0	0	0	0	0	1	0	No..	No..	220	6,100	500	25	1186
20	33	.....	.....	.....	.....	.....	.....	4	9	Yes.	No..	350	18,250	466	392	1187
30	33	0	2	.....	.....	0	.....	3	3	No..	Yes.	57	13,400	3,403	400	1188
30	25	0	0	0	0	30	0	2	6	No..	No..	200	8,010	.....	.....	1189
10	23	0	0	0	0	18	10	1	2	No..	No..	279	5,095	279	87	1190
19	32	.....	.....	1	2	14	17	1	2	Yes.	No..	102	5,115	910	34	1191
19	17	0	0	0	0	.....	.....	1	3	No..	No..	140	3,000	.....	120	1192
17	30	6	9	0	0	.....	.....	0	5	Yes.	No..	.....	5,010	1,535	99	1193
25	40	0	0	4	9	21	31	3	4	No..	No..	623	21,360	6,610	87	1194
46	35	0	0	0	0	8	13	4	10	No..	No..	200	12,000	.....	250	1195
20	25	0	0	.....	.....	.....	.....	2	3	No..	No..	127	3,025	429	249	1196
35	40	3	2	0	0	0	0	2	5	No..	No..	17	7,650	352	317	1197
30	36	.....	.....	.....	.....	.....	.....	2	0	No..	No..	.....	5,150	.....	126	1198
20	26	0	0	.....	.....	.....	.....	1	7	No..	No..	150	20,150	.....	210	1199
27	88	0	0	0	5	2	4	4	11	No..	No..	16,000	400	3,000	45	1200
25	35	0	0	0	0	0	0	.....	.....	No..	No..	350	2,850	700	99	1201
25	35	0	0	5	10	20	25	1	1	No..	No..	100	30,100	600	180	1202
25	32	0	0	.....	.....	.....	.....	8	3	No..	No..	2,000	50,100	7,400	131	1203
15	25	0	0	.....	.....	.....	.....	0	0	Yes.	No..	75	10,100	.....	400	1204
38	42	1	1	.....	.....	.....	.....	4	5	No..	No..	1,500	.....	.....	.....	1205
5	8	0	0	0	0	0	0	0	0	No..	No..	1,200	4,025	2,633	.....	1206
20	32	.....	.....	.....	.....	5	2	5	0	No..	No..	400	30,445	400	.....	1207
45	55	1	0	0	0	35	40	6	4	Yes.	Yes.	250	40,400	400	.....	1208
31	43	0	0	5	4	2	9	.....	6	No..	No..	500	10,250	400	.....	1209
15	20	0	0	8	19	.....	.....	1	7	Yes.	No..	300	9,150	4,400	50	1210
38	27	0	0	0	0	9	13	4	2	Yes.	No..	219	13,200	400	.....	1211
16	19	0	0	.....	.....	0	4	.....	.....	No..	No..	150	10,120	597	.....	1212
6	19	.....	.....	2	3	.....	.....	.....	.....	No..	No..	75	2,075	400	.....	1213
15	40	0	5	0	0	15	30	2	8	Yes.	No..	450	17,200	400	140	1214
27	35	0	0	10	11	12	29	0	0	No..	No..	284	30,225	400	.....	1215
12	19	0	0	7	10	2	0	.....	.....	Yes.	No..	300	10,150	400	12	1216
15	21	15	21	3	5	2	4	2	5	No..	No..	250	10,150	.....	47	1217
67	98	0	0	5	10	10	23	6	7	Yes.	No..	1,200	41,500	400	.....	1218
8	15	0	0	0	0	5	8	0	0	Yes.	No..	250	10,100	400	45	1219
13	19	0	0	.....	.....	13	19	0	1	Yes.	No..	106	18,250	400	189	1220
41	46	0	0	5	1	15	10	2	6	No..	No..	552	34,750	.....	.....	1221
17	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	No..	600	10,400	3,595	25	1222
18	22	0	0	3	2	0	0	2	1	No..	No..	0	8,050	.....	8	1223
23	35	.....	.....	.....	.....	.....	.....	0	0	Yes.	No..	208	4,650	550	.....	1224

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instruction.	
				Male.	Female.
	1	2	3	4	5
	MINNESOTA—cont'd.				
1225	Glencoe	Steven's Seminary and Public School.	E. E. McIntire	1	7
1226	Glenwood	Independent School	J. E. Gilman	1	2
1227	Hastings	High School	Minnie E. Kellar	1	3
1228	Henderson	do	Lafayette Bliss	1	1
1229	Hutchinson	do	H. L. Merrill	1	1
1230	Janesville	do	E. J. Donaldson	1	0
1231	Kasson	do	C. H. Roberts	1	1
1232	Kenyon	High School (department)	P. H. Bradley	1	3
1233	Lake City	High School	D. O. Bean	1	2
1234	Lake Crystal	do	S. S. Hilscher	1	0
1235	Lanesboro	do	K. W. Buell	0	5
1236	Le Roy	do	Chas. C. Miller	2	2
1237	Le Sueur	do	J. M. Richardson	2	1
1238	Litchfield	do	E. V. W. Brokaw	1	1
1239	Luverne	do	Geo. L. Leslie	1	1
1240	Madelia	High School (department)	W. S. Hammond	2	3
1241	Mankato	High School	Miss A. W. Ayres	0	3
1242	Mantorville	do	McD. Williams	1	3
1243	Mapleton	do	Wm. H. Rutherford	1	0
1244	Marshall	do	W. W. Kilgore	1	7
1245	Minneapolis	Central High School	John I. Crombie	8	24
1246	do	North Side High School	John N. Greer	1	12
1247	Montevideo	High School (department)	E. C. Wilkins	1	1
1248	Monticello	High School	A. T. Mann	0	4
1249	Moorehead	do	W. F. Webster, reporting officer.	1	3
1250	Morris	do	Joel N. Chiles	1	0
1251	New Ulm	do	Robt. Nix, superintendent	2	1
1252	Northfield	do	W. F. F. Selleck	1	1
1253	Ortonville	do	A. W. Varney	1	1
1254	Owatonna	do	Geo. F. Kewaston	2	3
1255	Plainview	do	J. A. Vandyke	1	1
1256	Preston	do	W. J. Alexander	1	1
1257	Red Wing	do	Zenas N. Vaughn	2	2
1258	Redwood Falls	do	O. E. Rice	1	6
1259	Rochester	do	Darius Stewart, superintendent.	(a)	
1260	Rushford	do	Jacob H. Rohrback	1	1
1261	St. Charles	do	Geo. A. Stanton	1	1
1262	St. Cloud	do	Miss L. M. Crandall	1	2
1263	St. Paul	Cleveland Branch High School.	S. A. Farnsworth	1	1
1264	do	Central High School	G. N. Carman	12	17
1265	do	Humboldt Branch High School.	Julian C. Bryant	3	2
1266	do	Van Buren High School	Chas. McGee	3	2
1267	do	Webster High School	Miss Lucia M. Miller	3	3
1268	St. Peter	High School	E. George	1	2
1269	Sauk Center	do	O. I. Woodley	1	2
1270	Slayton	do	S. C. Pew	1	0
1271	Sleepy Eye	Public School	E. E. Lockerby	2	0
1272	Stillwater	High School	Miss S. E. Palmer	3	3
1273	Tracy	High School (department)	H. G. Klepper	1	36
1274	Wabasha	High School	V. W. Lothrop	1	1
1275	Wadena	High School (department)	J. A. Cranston	1	1
1276	Wasoca	do	F. V. Hubbard	1	1
1277	Wells	High School	V. R. Wasson	1	1
1278	Willmar	do	Wm. A. Hadley	1	2
1279	Windom	do	P. G. Fullerton	1	1
1280	Winnebago City	do	H. C. Hess	1	1
1281	Winona	do	S. A. Merritt	3	2
1282	Worthington	do	W. W. Hobbs	1	2
1283	Zumbrota	do	Geo. E. St. John	1	1

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
26	32	0	0	8	7	5	0	4	4	No.	No.	600	$11,000	$400	$20	1225
20	55	0	0	0	0	2	3	0	0	No.	No.	215	10,150			
55	31	0	0	0	0	0	0	3	12	No.	No.	3,061	31,000	800	112	1226
31	51	0	0	0	0	10	6	2	3	No.	No.	350	12,200	14,000		1227
14	20	0	0	0	0	7	6	2	1	No.	No.	500	25,500	400	60	1228
10	16	0	0	0	0	0	0	0	0	No.	No.	200	6,000	400		1229
24	20	0	0	4	9	0	0	1	7	Yes.	No.	140	20,100			1230
21	25	0	0	0	0	0	0	0	0	No.	No.		7,000	400		1231
43	28	0	0	0	0	0	0	0	0	Yes.	Yes.	650	1,500	608	57	1232
23	47	0	0	0	0	0	0	0	0	No.	No.		12,000	400		1233
10	8	0	0	15	0	0	0	0	0	Yes.	No.	300	10,200			1234
21	30	0	0	4	0	0	0	0	0	Yes.	No.	90	3,650	400		1235
28	28	0	0	0	10	0	20	0	0	No.	No.	200	22,000	753	13	1236
27	23	0	0	0	0	0	0	0	0	No.	No.	380	25,460		100	1237
19	42	0	0	0	10	0	30	0	0	No.	No.	200	30,500	400	200	1238
20	36	0	0	2	15	0	30	0	0	No.	No.	180	5,050	400		1239
46	30	0	0	0	9	0	18	0	0	No.	No.	820	17,200	3,324	202	1240
12	41	0	0	1	24	0	22	0	0	No.	No.	300	30,060	400		1241
12	16	0	0	0	5	0	10	0	0	Yes.	No.	150	7,500	600	75	1242
14	16	0	0	0	2	0	1	0	0	No.	No.	250	16,200	2,424	217	1243
23	34	0	0	0	4	0	0	0	0	No.	Yes.	8,000	250,000			1244
294	514	0	0	2	8	0	6	0	0	No.	No.	1,000	80,200		200	1245
70	82	0	0	8	19	0	8	0	0	Yes.	No.	119	15,200			1246
25	32	0	0			0	5	0	0	No.	No.	137	15,175	1,653		1247
16	30	0	0			7	8	0	0	Yes.	Yes.	1,700	30,300	1,211	273	1248
12	31	0	0			40	3	0	0					3,200		1249
8	23	0	0	0	0	0	0	0	0	No.	No.	50	25,150			
10	9	0	0	12	15	0	0	0	0	Yes.	Yes.	522	26,600	400		1250
30	2	0	0	1	4	0	0	0	0	No.	No.	500	49,350	60		1251
12	45					0	0	0	0	No.	No.	150	10,175	400	311	1252
50	14	0	0	0	0	0	0	0	0	No.	Yes.	1,000	40,700	400		1253
12	49	0	0	5	2	0	0	0	0	Yes.	No.	450	14,300	700	175	1254
30	40	2	2	3	2	0	0	0	0	No.	No.	300	25,700	400		1255
42	54	0	0	6	20	0	0	0	0	Yes.	No.	675	26,000	400		1256
16	33	0	0	18	12	0	2	0	0	No.	No.	70	20,125			1257
24	25	0	0	10	0	8	6	0	0	No.	No.			400	86	1258
19	5	0	0	20	10	0	3	0	0	No.	No.					1259
23	21	0	0	0	10	0	4	0	0	No.	No.					
14	22	0	0	0	6	0	2	0	0	No.	No.	300	200	400		1260
12	23	0	0	0	4	0	6	0	0	No.	No.	367	17,700	400		1261
245	16	0	0	5	10	5	8	0	0	No.	No.	250	20,500	400		1262
30	416	3	5	2	0	1	0	0	0	No.	No.	960	66,100	15,500	90	1263
	22	0	4	0	0	0	0	0	0	No.	Yes.					
2		3	2			0	0	0	0	No.	No.	1,385	270,000	967	300	1264
14	28	0	0	0	0	0	0	0	0	No.			82,460			1265
15	34	0	0	0	0	0	0	0	0	No.						
19	25	0	0	3	0	0	0	0	0	No.	No.	0	75,000			1266
5	6	0	0	0	0	0	0	0	0	No.	No.	315	66,730			1267
28	26	0	0	2	11	0	0	0	0	No.	No.	440	28,450	15,000	55	1268
28	28	0	0	11	26	0	0	0	0	No.	No.	500	6,500	400		1269
28	28	0	0	12	25	0	0	0	0	No.	No.	33	3,540	490	18	1270
28	28	0	0	10	15	0	0	0	0	No.	No.	500	15,300	8,000	35	1271
28	28	0	0	1	10	0	0	0	0	No.	No.	800	52,500	400		1272
28	28	0	0	3	22	0	0	0	0	No.	No.	2,125	8,300	1,800		1273
28	28	0	0	0	0	0	0	0	0	No.	No.	125	20,100	1,750		1274
28	28	0	0	0	0	0	0	0	0	No.	No.	249	12,200			1275
28	28	0	0	0	0	0	0	0	0	No.	No.	500	26,000	400	55	1276
28	28	0	0	0	0	0	0	0	0	No.	No.	700	20,150	400	250	1277
28	28	0	0	0	0	0	0	0	0	No.	No.	300	12,200	400	90	1278
28	28	0	0	0	0	0	0	0	0	No.	No.	115	6,120	1,000	20	1279
28	28	0	0	0	0	0	0	0	0	No.	Yes.	301	13,275	400	154	1280
28	28	0	0	0	0	0	0	0	0	No.	Yes.	700	64,000			1281
28	28	0	0	0	0	0	0	0	0	No.	Yes.	500	40,400	400	150	1282
28	28	0	0	0	0	0	0	0	0	No.	No.	125	9,000	400	25	1283

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	MISSISSIPPI.				
1284	Brandon	Male School	F. A. Hatton	1	1
1285	Brooksville	High School	H. E. Harlan	1	2
1286	Columbus	Franklin Academy	J. M. Barrow	3	a3
1287	Columbus	Union Academy	W. I. Mitchell	3	5
1288	Crystal Springs	High School	P. M. Tyler	1	1
1289	Gillsburg	Collegiate Institute	Prof. W. K. Nettles	3	2
1290	Holly Springs	Normal Institute	W. A. Anderson	2	2
1291	Houlka	High School	E. A. Smith	2	2
1292	Jackson	High School (department)	J. E. Erwin	1	0
1293	Macon	do	A. F. Moncreiff	2	2
1294	Natchez	Natchez Institute	W. H. Kee	1	1
	MISSOURI.				
1295	Adrian	High School (department)	Prof. Frank Deerwester	1	2
1296	Albany	High School	W. T. Martin	0	2
1297	Alton	Alton Academy	W. Heiskell	1	1
1298	Boonville	High School (department)	F. W. Ploger	1	0
1299	Breckenridge	High School	F. S. Lonsdale	1	0
1300	Buffalo	do	I. W. Wingo	2	2
1301	Butler	do	J. F. Starr	1	1
1302	California	do	S. G. Landon	1	1
1303	Canton	do	A. B. Price	1	0
1304	Carrollton	High School (department)	J. G. McVeight, superintendent.	2	1
1305	Carterville	do	C. B. Davis	3	7
1306	Carthage	High School	J. M. White, superintendent.		
1307	Cassville	Collegiate Institute	N. L. Maiden	2	2
1308	Chillicothe	High School (department)	W. W. Griffith	2	1
1309	Clinton	High School	C. B. Reynolds	1	2
1310	Craig	do	F. L. Maxwell	1	2
1311	Curryville	High School (department)	R. R. Rowley	2	1
1312	Dawn	High School	G. T. Foster	1	1
1313	Dexter	High School (department)	A. E. Randal	1	3
1314	Golden City	do	A. R. McClelland	1	1
1315	Hamilton	do	J. F. Pratt	4	a5
1316	Hannibal	Douglass High School	J. H. Pelham	1	0
1317	Hannibal	High School	F. H. Loomis	2	2
1318	Hardin	High School (department)	J. P. Cummings	2	a2
1319	Harrisonville	High School	H. F. Triplett	1	2
1320	Hermitage	do	J. A. Woodford	1	1
1321	Higginsville	do	R. H. Emberson	4	a6
1322	Independence	do	James M. Skinner	1	0
1323	Ironton	High School (department)	A. P. Vance	2	2
1324	Kansas City	Central High School	John T. Buchanan	9	7
1325	Kansas City	Lincoln High School	G. W. Grisham	2	1
1326	Kingston	High School	S. C. Rogers	3	1
1327	Kirksville	do	D. F. Gentry	4	a12
1328	Lancaster	High School (department)	G. H. Owen	1	4
1329	Lexington	High School	H. D. Demand, superintendent.	1	1
1330	Linn	do	L. W. Dallas	1	1
1331	Louisiana	do	R. B. D. Simonson	2	0
1332	Maryville	High School (department)	B. F. Duncan	2	2
1333	Memphis	High School	A. R. Morgan	1	a7
1334	Mexico	do	D. A. McMillan	3	
1335	Miami	High School (department)	E. E. Barnett	2	0
1336	Moberly	High School	D. E. Cloyd	1	1
1337	Montrose	High School (department)	J. B. Norman	1	0
1338	Mound City	High School	W. S. Dearmont	1	1
1339	Neosho	High School (department)	Wm. N. Vaughn	2	1
1340	do	do	Franklin P. Sever	1	1

a Also give instruction in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
15	0	0	0	10	0	5	0	0	0	No..	No..	0	$700	$600	$300	1284
39	36	0	0	.....	.....	.....	.....	0	0	No..	No..	0	1,000	550	760	1285
25	20	0	0	4	20	.....	.....	8	7	Yes.	No..	0	30,000	9,000	25	1286
40	65	40	65	1	16	.....	.....	0	0	No..	No..	.....	3,000	2,500	30	1287
17	31	0	0	0	0	0	0	.....	.....	No..	No..	0	1,500	.....	.....	1288
97	78	0	0	0	0	0	0	4	1	.....	No..	173	2,550	.....	.....	1289
40	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	No..	.....	3,025	.....	.....	1290
15	20	0	0	2	2	10	15	0	0	No..	No..	0	1,000	475	225	1291
2	20	0	0	2	10	.....	.....	0	0	No..	No..	500	35,000	7,000	600	1292
12	25	0	0	.....	.....	.....	.....	0	0	Yes.	No..	0	1,500	5,000	400	1293
26	56	0	0	0	0	12	25	5	12	No..	No..	0	50,100	6,080	.....	1294
20	29	0	0	5	10	1	2	2	1	Yes.	No..	0	3,000	518	.....	1295
30	30	0	0	.....	.....	.....	.....	.....	.....	No..	No..	250	15,000	2,500	300	1296
30	32	0	0	3	4	2	2	0	0	No..	No..	0	1,500	500	.....	1297
6	19	6	19	.....	.....	.....	.....	3	6	No..	No..	300	30,000	2,300	200	1298
21	27	7	11	1	3	1	0	.....	.....	No..	No..	110	12,560	684	130	1299
10	10	.....	.....	.....	.....	.....	.....	0	0	No..	No..	20	10,000	.....	.....	1300
8	28	0	0	.....	.....	.....	.....	4	6	Yes.	No..	150	75	.....	90	1301
12	20	.....	.....	0	0	0	0	0	8	Yes.	No..	200	25,050	803	145	1302
12	18	0	0	1	1	8	6	1	1	No..	No..	50	14,000	1,122	54	1303
60	40	0	0	18	15	.....	.....	9	4	No..	No..	250	25,150	.....	.....	1304
17	24	0	0	3	5	2	.....	1	4	No..	No..	25	11,050	1,000	.....	1305
72	115	.....	.....	.....	.....	.....	.....	10	1	.....	.....	.....	.....	.....	.....	1306
50	40	0	0	40	25	5	1	8	1	No..	No..	600	12,080	1,600	700	1307
15	30	.....	.....	2	6	20	15	2	6	Yes.	No..	5,300	50,200	16,000	64	1308
35	51	.....	.....	.....	.....	0	0	4	6	No..	No..	200	50,150	14,114	19	1309
18	16	0	0	4	2	0	0	0	0	Yes.	No..	6	7,175	643	50	1310
16	17	10	8	4	5	.....	.....	1	3	No..	No..	0	1,700	167	10	1311
22	25	.....	.....	.....	.....	.....	.....	.....	.....	No..	No..	150	2,150	1,000	.....	1312
15	20	.....	.....	.....	.....	.....	.....	.....	.....	No..	No..	150	7,050	300	.....	1313
6	13	0	0	.....	.....	.....	.....	3	11	No..	No..	38	1,220	1,000	125	1314
30	35	13	20	.....	.....	.....	.....	0	2	No..	No..	0	20,000	500	150	1315
15	12	17	15	.....	.....	.....	.....	1	4	No..	No..	400	14,075	.....	.....	1316
33	92	.....	.....	.....	.....	.....	.....	1	11	Yes.	No..	200	20,300	.....	200	1317
10	19	19	18	6	13	3	5	6	7	Yes.	No..	200	6,100	400	75	1318
63	62	0	0	.....	.....	.....	.....	7	6	Yes.	No..	800	35,300	5,000	600	1319
18	20	0	0	0	0	0	0	.....	.....	Yes.	No..	0	6,000	125	.....	1320
10	15	5	5	.....	.....	5	10	0	0	No..	No..	600	19,200	6,345	96	1321
13	34	.....	.....	.....	.....	.....	.....	0	2	No..	No..	700	100	.....	56	1322
16	18	22	31	6	5	.....	.....	10	10	No..	No..	100	10,000	6,286	36	1323
280	505	0	0	.....	.....	.....	.....	16	49	No..	No..	0	104,000	.....	95	1324
10	47	10	47	.....	.....	.....	.....	0	0	Yes.	No..	0	18,250	3,000	.....	1325
20	21	20	21	5	3	.....	.....	0	0	Yes.	No..	0	15,005	202	20	1326
36	50	39	37	.....	.....	.....	.....	2	6	No..	No..	175	35,010	1,200	30	1327
20	22	.....	.....	.....	.....	.....	.....	.....	.....	Yes.	No..	250	10,000	696	265	1328
29	43	0	0	0	0	.....	.....	3	3	No..	No..	25	12,050	8,178	108	1329
20	25	20	25	0	0	1	0	2	0	No..	No..	300	2,125	600	300	1330
25	38	.....	.....	2	8	0	0	1	16	No..	No..	1,500	25,025	1,721	35	1331
50	70	13	17	15	10	18	20	3	6	No..	No..	0	50,150	2,000	250	1332
20	38	13	16	0	0	0	0	1	2	No..	No..	200	15,100	.....	50	1333
49	66	.....	.....	20	30	10	18	5	12	No..	No..	1,200	35,000	11,566	561	1334
20	20	20	20	3	5	1	0	1	3	No..	No..	150	8,028	1,100	98	1335
43	74	0	0	0	0	0	0	5	14	No..	No..	300	20,100	1,200	290	1336
1	4	0	0	1	0	0	0	0	3	Yes.	No..	75	3,000	200	125	1337
17	43	0	0	0	0	0	0	0	1	Yes.	No..	150	15,030	4,200	285	1338
15	24	.....	.....	0	0	.....	5	.....	.....	No..	No..	0	1,500	171	.....	1339
9	21	12	10	1	2	0	0	0	7	Yes.	No..	500	40,000	1,000	75	1340

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	MISSOURI—continued.				
1341	Nevada	High School	F. N. Peters	2	1
1342	Newtonia	High School (department)	S. L. Slane	2	2
1343	Oak Ridge	High School	Benj. F. Lusk	2	1
1344	Odessa	do	Jas. A. Kemper	2	1
1345	Oregon	High School (department)	J. W. Kieff	1	1
1346	Osceola	High School	A. W. Duff	1	1
1347	Ozark	do	L. H. Crawford	1	0
1348	Pierce City	do	Prof. Clark	1	1
1349	Pleasant Hill	do	George W. McCurdy	1	1
1350	Queen City	High School (department)	John W. McNaught, reporting officer.	1	1
1351	Rich Hill	High School	J. C. Ryan, superintendent.	2	0
1352	St. Joseph	do	Frank Strong	3	3
1353	St. Louis	Central High School	F. Louis Soldan	18	30
1354	Salem	High School (department)	S. S. Barrett	2	0
1355	Sarcoxie	High School	W. C. Sebring	2	1
1356	Savannah	do	G. W. Newton	1	1
1357	Sedalia	do	W. A. Rawles	1	3
1358	Slater	do	J. W. Bailey	2	2
1359	Springfield	do	W. T. Carrington	1	5
1360	Sweet Springs	do	George B. Cook	1	1
1361	Trenton	do	H. E. Du Bois	1	1
1362	Webb City	do	W. J. Stevens	1	1
1363	Weston	High School (department)	C. W. Brown	2	2
1364	Windsor	do	George B. Sturgis	2	0
	MONTANA.				
1365	Bozeman	High School (department)	W. E. Harmon, superintendent.	1	1
1366	Butte	High School	Eugene A. Steere	1	2
1367	Deer Lodge	do	C. M. Foote	1	0
1368	Dillon	do	Mary E. Hanks (Miss)	0	2
1369	Helena	do	S. A. Merritt	(3)	
1370	Lewistown	High School (department)	J. M. Parrent	1	2
1371	Livingston	High School	M. R. Wilson	1	4
1372	Miles City	do	J. C. Templeton	1	1
1373	Missoula	do	J. M. Hamilton	1	0
1374	White Sulphur Springs.	do	D. Driscoll	1	3
	NEBRASKA.				
1375	Ainsworth	High School	C. D. Mariner	1	0
1376	Albion	do	F. E. Jenkins	1	1
1377	Alma	do	P. P. Bentley	1	1
1378	Ansley	do	S. McKitrick	1	2
1379	Ashland	do	J. W. Crabtree	4	a9
1380	Aurora	High School (department)	J. M. Hussey	1	1
1381	Beatrice	High School	O. H. Brainerd	1	2
1382	Beaver City	High School (department)	W. J. Lutton	1	a4
1383	Bloomington	do	J. H. O'Donoghue, reporting officer.	1	1
1384	Blue Hill	High School	J. R. Thornton	1	0
1385	Cambridge	do	Ira Doling	1	2
1386	Cedar Rapids	High School (department)	G. W. Crozier, B. S	1	3
1387	Chadron	High School	John O. Taylor	1	a7
1388	Columbus	High School (department)	A. N. Ballou	1	2
1389	Craig	High School	Geo. L. Griswold	1	2
1390	Crete	do	W. H. Skinner, superintendent.	2	a11
1391	Dawson	High School (department)	R. L. Hoff	1	1

a Also give instruction in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
35	68	----	----	----	----	12	20	5	10	Yes.	No..	1,200	$35,500	$1,000	$300	1341
28	38	12	11	4	11	2	3	1	5	Yes.	No..	100	5,000	1,000	-------	1342
25	15	25	15	----	----	0	0	0	0	No..	No..	0	3,500	600	-------	1343
22	25	----	----	----	----	----	----	8	4	No..	No..	306	12,048	1,200	176	1344
10	20	10	15	----	----	3	0	2	3	Yes.	No..	50	20,075	1,014	274	1345
16	22	0	0	0	0	3	3	1	2	No..	No..	114	7,030	-------	84	1346
18	9	----	----	1	0	0	0	0	0	Yes.	No..	----	4,070	500	40	1347
19	3	0	0	0	0	0	0	0	0	No..	No..	50	----	----	----	1348
18	30	----	----	----	----	----	----	2	4	Yes.	No..	----	13,800	1,540	110	1349
24	36	----	----	----	----	----	----	----	----	No..	No..	0	1,600	875	112	1350
30	70	7	13	4	6	0	0	0	11	Yes.	No..	0	30,000	3,200	10	1351
74	149	----	----	4	0	4	0	9	17	No..	No..	250	30,600	-------	-------	1352
384	1,098	0	0	13	152	----	----	13	152	No..	No..	0	518,194	-------	500	1353
24	26	0	0	4	10	6	7	4	4	Yes.	No..	300	100	-------	-------	1354
26	25	0	0	0	0	0	0	----	----	No..	No..	150	5,000	386	125	1355
20	35	0	0	----	----	----	----	0	5	No..	No..	300	20,300	4,341	137	1356
64	99	0	0	5	2	4	0	6	18	No..	No..	800	20,100	-------	90	1357
17	35	----	----	0	0	----	----	0	4	Yes.	No..	750	17,250	5,350	260	1358
99	222	14	11	0	0	99	222	15	20	No..	No..	200	40,100	-------	320	1359
26	10	15	10	3	10	2	4	2	4	Yes.	No..	156	3,000	305	206	1360
23	64	0	0	2	4	6	5	0	6	No..	No..	658	60	-------	175	1361
9	16	0	0	0	0	0	0	2	4	No..	No..	60	20,000	-------	-------	1362
24	32	----	----	----	----	----	----	----	----	No..	No..	0	1,200	-------	-------	1363
12	26	----	----	2	3	1	0	1	3	No..	No..	----	12,150	5,049	300	1364
16	20	4	3	0	0	----	----	0	3	No..	No..	155	35,005	-------	15	1365
33	41	0	0	2	0	1	0	7	4	No..	No..	125	20,100	4,300	-------	1366
9	23	0	0	0	0	----	3	2	1	No..	No..	300	20,005	-------	-------	1367
28	32	0	0	0	0	0	0	0	Yes.	No..	250	25,000	-------	75	1368	
16	47	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1369
14	13	0	0	7	6	5	4	0	0	No..	No..	0	10,100	3,060	175	1370
38	34	2	1	5	7	4	6	5	3	Yes.	No..	234	15,100	-------	-------	1371
10	12	0	2	0	1	2	0	0	0	Yes.	No..	350	15,050	5,000	50	1372
9	16	0	0	----	----	----	----	0	0	Yes.	No..	250	30,300	6,000	250	1373
16	20	2	4	6	2	----	----	0	0	No..	No..	121	10,000	-------	-------	1374
10	20	0	0	0	1	1	0	0	2	Yes.	No..	0	10,000	-------	-------	1375
17	23	0	0	7	10	----	----	0	5	No..	Yes.	265	22,040	-------	160	1376
39	40	1	0	2	3	----	----	1	4	Yes.	No..	250	8,200	-------	100	1377
9	13	0	0	0	0	----	----	----	----	No..	No..	0	4,787	150	12	1378
20	25	0	0	0	0	3	9	3	4	Yes.	No..	300	12,300	2,000	150	1379
41	40	3	5	41	40	----	----	7	7	No..	No..	272	17,150	2,336	225	1380
19	47	0	2	----	----	----	----	0	8	No..	No..	400	400	-------	150	1381
17	17	0	0	0	0	0	0	----	----	Yes.	No..	75	8,000	-------	-------	1382
20	36	----	----	1	3	----	----	1	1	No..	No..	150	6,150	4,000	150	1383
18	18	----	----	----	----	----	----	1	0	----	----	100	6,160	2,500	50	1384
20	22	0	0	----	----	----	----	3	----	Yes.	No..	30	7,525	350	69	1385
12	18	0	0	2	1	1	0	1	2	Yes.	No..	104	15,040	250	75	1386
27	44	2	3	13	9	10	14	4	7	Yes.	No..	300	30,325	9,300	-------	1387
19	32	1	1	2	6	8	35	1	6	No..	No..	84	40,200	1,300	91	1388
25	13	0	0	0	0	0	0	0	0	No..	No..	24	3,040	300	30	1389
59	54	0	0	1	1	4	4	8	7	Yes.	No..	250	42,600	3,247	184	1390
12	9	0	0	5	0	0	0	0	0	Yes.	No..	25	2,525	1,000	65	1391

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	NEBRASKA—cont'd.				
1392	Dunbar	High School	N. Sinclair	1	1
1393	Edgar	do	M. B. C. True	1	1
1394	Ewing	do	Will R. Jackson	1	3
1395	Fairbury	do	C. P. Cary, superintendent.	1	1
1396	Fairfield	High School (department)	J. D. McKee	2	a5
1397	Fairmount	High School	J. S. Van Eaton	1	0
1398	Falls City	do	C. A. Woody, superintendent.	1	a12
1399	Fremont	do	J. A. Hornberger, superintendent.	2	2
1400	Genoa	do	Wm. J. Stewart	1	3
1401	Gering	High School (department)	E. P. Cromer	2	0
1402	Gibbon	do	C. A. Fulmer	1	1
1403	Grafton	High School	W. H. Bartz	2	2
1404	Grand Island	do	F. P. Olmstead	3	0
1405	Greeley Center	do	F. W. Russell	2	1
1406	Hartington	do	A. H. Collins	1	2
1407	Harvard	do	A. V. Storm	1	2
1408	Hastings	do	Miss M. L. Jones	1	2
1409	Hebron	High School (department)	W. W. Brittain	1	1
1410	Holdrege	High School	Miss Simpson	1	1
1411	Hooper	do	T. H. Dabney	1	0
1412	Humboldt	do	Geo. R. Chatburn	1	1
1413	Kearney	do	J. F. Morey	3	1
1414	Lincoln	do	Burr Lewis	3	6
1415	Long Pine	do	Julius Conklin	1	a3
1416	Loup City	do	M. H. Carleton	1	3
1417	Minden	do	W. A. Julian	1	1
1418	Nelson	do	L. W. Fike	1	1
1419	North Bend	do	J. A. Dowden	1	2
1420	North Platte	do	M. H. Lobdell	2	0
1421	Oakland	do	D. E. Reese	1	1
1422	Ogallala	do	Miss M. E. Brown	0	1
1423	Omaha	do	Homer P. Lewis	7	12
1424	O'Neill	do	John Bland	1	0
1425	Ord	do	J. K. Campbell	1	1
1426	Orleans	High School (department)	G. R. McCrary	1	0
1427	Palmyra	High School	W. M. Griffith	1	0
1428	Pawnee City	High School (department)	W. J. Wise	1	2
1429	Plattsmouth	do	W. N. Halsey	2	1
1430	Ponca	High School	Miss M. Gallagher	1	1
1431	Ravenna	High School (department)	H. E. Funk	1	0
1432	Red Cloud	do	A. K. Goudy	1	11
1433	Riverton	High School	C. B. Pickrell	1	3
1434	Rulo	do	S. W. Witman	2	2
1435	Schuyler	do	A. B. Hughes	2	1
1436	Sidney	do	W. J. McCoy	1	1
1437	South Omaha	do	A. A. Munroe	2	2
1438	South Sioux City	High School (department)	I. A. Sabin	1	0
1439	Stanton	High School	B. F. Miller	1	0
1440	Stella	do	E. Wm. Lawson	2	2
1441	Stockham	do	E. C. Grubbs	1	1
1442	Stromsburg	High School (department)	J. A. Welker	1	1
1443	Superior	do	I. E. Wilson	2	1
1444	Syracuse	do	A. L. Caviness	1	0
1445	Talmage	do	J. W. Jones	1	2
1446	Tecumseh	High School	D. A. Cooper	1	2
1447	Tekamah	do	C. F. Beck	1	1
1448	Trenton	do	J. B. Morgan	1	2
1449	Ulysses	do	C. H. Aldrich, B. A	1	3
1450	Valparaiso	do	G. W. Fox	2	a2
1451	Wahoo	do	T. H. Bradbury	1	1

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
13	15	0	0	0	0	0	0	3	8	Yes.	No..	25	$2,000	$670	$30	1392
22	25	1	1	3	2	.....	.....	2	2	.....	No..	248	9,000	.....	145	1393
13	25	1	3	1	1	2	1	0	0	No..	No..	40	6,075	.....	60	1394
30	30	0	0	3	3	0	0	3	3	No..	No..	100	20,300	7,500	150	1395
17	24	.....	.....	.....	.....	7	11	.....	.....	Yes.	No..	150	200	33	14	1396
17	33	1	1	.....	.....	4	12	1	5	.....	No..	340	12,150	550	268	1397
39	44	6	6	3	6	3	4	4	5	No..	No..	200	25,050	8,130	100	1398
25	64	0	0	10	20	5	10	5	11	No..	No..	350	4,500	5,000	85	1399
14	20	0	0	0	0	0	0	0	0	No..	No..	20	.....	.....	.....	1400
2	8	0	0	0	0	1	1	0	0	Yes.	No..	0	800	80	35	1401
12	23	0	0	0	0	0	0	4	8	Yes.	No..	100	6,000	500	15	1402
19	18	0	0	0	0	0	0	3	0	Yes.	No..	0	3,050	180	42	1403
40	60	0	0	3	1	2	4	7	14	No..	No..	150	165,350	4,554	24	1404
1	2	0	0	.....	.....	.....	.....	0	0	Yes.	No..	25	7,600	150	.....	1405
7	10	0	0	0	0	0	0	0	0	Yes.	No..	100	5,025	.....	125	1406
46	41	0	0	0	0	.....	.....	3	1	Yes	No..	200	10,350	550	106	1407
27	51	0	0	.....	.....	.....	.....	2	2	Yes.	No..	100	300	.....	48	1408
3	11	2	1	0	0	0	0	2	12	Yes.	No..	50	25,050	.....	15	1409
12	15	0	0	10	5	12	15	4	1	Yes.	No..	20	25,250	878	40	1410
6	4	0	0	3	2	7	5	0	0	Yes.	No..	27	8,100	3,100	.....	1411
27	35	5	2	0	0	27	35	3	2	No..	No..	35	16,150	1,600	403	1412
20	30	0	0	0	0	0	2	5	9	No..	No..	100	50	.....	.....	1413
87	135	1	0	14	26	27	55	11	25	No..	No..	2,000	61,100	.....	87	1414
11	15	0	0	0	0	0	0	0	0	Yes.	No..	200	7,075	4,166	.....	1415
17	23	0	0	0	3	0	0	0	0	Yes.	No..	.....	4,400	1,922	.....	1416
19	33	0	0	.....	.....	.....	.....	3	1	Yes.	.....	0	12,150	.....	200	1417
15	25	0	0	5	3	.....	.....	2	0	Yes.	No..	50	6,000	.....	80	1418
11	23	0	0	5	14	6	9	6	9	Yes.	No..	100	18,100	5,000	75	1419
13	26	0	0	.....	.....	.....	.....	1	2	Yes.	No..	230	45,075	1,270	.....	1420
18	22	0	0	0	0	1	1	0	2	No..	No..	113	15,000	1,754	180	1421
10	20	0	0	2	0	0	3	0	0	No..	No..	30	8,150	.....	18	1422
200	333	2	6	35	20	6	3	29	36	No..	Yes.	600	685,000	.....	105	1423
12	15	.....	.....	3	4	.....	.....	2	5	Yes.	No..	20	15,250	5,000	120	1424
18	16	0	0	13	9	5	7	4	2	Yes.	No..	140	10,050	3,800	50	1425
6	12	0	0	0	0	0	0	2	6	No..	No..	15	7,500	538	.....	1426
8	5	0	0	.....	.....	.....	.....	1	0	Yes.	No..	12	5,125	.....	.....	1427
16	48	1	0	5	20	6	25	0	7	Yes.	No..	250	25,400	1,177	150	1428
19	44	1	3	.....	.....	.....	.....	1	7	Yes.	Yes.	54	66,500	2,890	77	1429
20	24	.....	.....	0	1	.....	.....	4	5	No..	No..	200	3,560	.....	60	1430
2	6	0	0	0	.....	2	6	0	0	Yes.	No..	0	5,000	160	.....	1431
48	52	1	1	0	0	.....	.....	2	1	Yes.	No..	150	20,200	.....	.....	1432
18	19	0	0	.....	.....	.....	.....	0	1	Yes.	No..	20	3,040	200	45	1433
9	22	0	0	1	0	.....	.....	0	0	No..	No..	0	14,000	400	.....	1434
18	41	0	0	.....	.....	1	2	3	1	No..	No..	207	10,300	5,000	.....	1435
9	13	0	0	.....	.....	2	1	0	0	Yes.	No..	25	2,200	400	.....	1436
4	9	5	6	2	3	1	6	0	0	Yes.	No..	200	68,500	2,457	40	1437
9	6	0	0	2	0	0	0	0	0	No..	No..	0	12,000	2,000	12	1438
21	19	0	0	2	4	1	1	2	3	Yes.	No..	0	25,050	3,800	50	1439
18	22	0	0	1	0	1	0	2	1	Yes.	No..	0	3,500	.....	125	1440
18	12	0	0	0	0	.....	.....	.....	.....	Yes.	No..	35	5,300	350	125	1441
15	20	0	0	0	0	0	0	2	5	Yes.	No..	75	10,100	800	50	1442
34	48	0	0	0	1	2	2	3	5	Yes.	No..	48	35,275	2,297	33	1443
8	5	1	0	1	0	2	0	0	0	No..	No..	0	1,625	4,706	57	1444
31	25	0	0	0	0	.....	.....	0	0	No..	No..	7	5,616	274	.....	1445
18	35	0	0	6	8	.....	.....	1	4	Yes.	No..	100	15,250	.....	150	1446
30	73	0	0	0	0	0	0	4	15	No .	No..	100	250	.....	.....	1447
12	8	0	0	2	3	.....	.....	0	1	Yes.	No..	150	6,000	.....	60	1448
15	25	.....	.....	3	3	2	0	3	3	.....	No..	200	12,000	500	105	1449
3	8	0	0	.....	.....	.....	.....	0	1	.....	.....	.....	4,000	515	13	1450
30	50	.....	.....	8	14	5	5	7	5	Yes.	No..	167	16,100	.....	340	1451

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	NEBRASKA—cont'd.				
1452	Weeping Water	High School	A. H. Waterhouse	1	5
1453	West Point	High School (department) district No. 1.	D. S. Dusenberry	2	a2
1454	Wilber	High School	W. W. Boner	2	0
1455	Wood River	do	W. L. Sprague	1	1
1456	York	do	Miss H. Woolley	1	2
	NEVADA.				
1457	Carson City	High School	H. H. Howe	1	1
1458	Gold Hill	do	R. C. Story	1	1
1459	Reno	do	Owis Ring	1	2
1460	Tuscarora	High School (department)	J. G. Cromwell	1	2
	NEW HAMPSHIRE.				
1461	Amherst	High School	Miss J. W. Beale	0	2
1462	Ashland	do	F. E. Clark	1	0
1463	Berlin	do	F. S. Brick, B. S	1	1
1464	Bristol	do	E. A. Nelson	0	1
1465	Charlestown	do	James H. Johnson, A. B	1	0
1466	Claremont	Stevens High School	Melvill C. Smart	1	3
1467	Concord	High School	John F. Kent	1	4
1468	Dover	do	Frank W. Whitney	1	4
1469	Exeter	*High School	Albion Burbank	1	1
1470	Franklin Falls	do	W. E. Sargent	1	1
1471	Goffstown	do	E. R. Pearse	1	4
1472	Gorham	do	Chas. S. Paige	1	1
1473	Great Falls	do	Henry S. Roberts, A. M	1	2
1474	Greenland	do	Miss A. M. Howe	0	1
1475	Hampstead	do	Edwin H. Whitehill	1	0
1476	Hampton	Hampton Academy and High School.	Jack Samborn	1	2
1477	Hanover	High School	J. E. Buck	1	0
1478	Hinsdale	do	Robert A. Ray	1	2
1479	Hollis	do	A. J. Grant	1	0
1480	Keene	do	Chas. H. Douglass, A. M	2	3
1481	Laconia	do	W. N. Cragin	1	1
1482	Lebanon	do	Robert Forsyth	1	2
1483	Littleton	do	D. T. Dame	1	1
1484	Manchester	do	Albert Somes	3	3
1485	Marlow	do	Fred C. Ball	1	0
1486	Milford	do	F. W. Farnsworth	1	2
1487	Nashua	do	L. S. Hastings	1	4
1488	New Market	do	R. A. Parker	1	0
1489	Newport	do	F. O. Chelbis	1	1
1490	Petersboro	do	Miss H. M. Greenwood	0	2
1491	Pittsfield	do	F. W. Newell	1	1
1492	Portsmouth	do	J. H. Upton	1	4
1493	Rochester	do		3	1
1494	Rye	do	W. E. Soule	1	0
1495	Salmon Falls	High School (Franklin)	H. L. Allen	1	0
1496	Warner	Free High School	C. J. Emerson, A. B	1	1
1497	Whitefield	High School	C. H. Murdock	1	0
1498	Wilton	do	Chas. W. Marshall	1	0
1499	Winchester	do	H. P. Young, A. M	1	1
	NEW JERSEY.				
1500	Atlantic City	High School	E. C. Hilton	0	2
1501	Barnegat	High School (department)	E. B. Collins	0	3
1502	Boonton	do	L. J. Whitney	1	2
1503	Bordentown	do	Wm. Macfarland	1	3

a Also give instruction in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
25	27	3	2	.....	.....	.....	.....	.....	.....	Yes.	No..	200	$16,000	.....	$100	1452
4	4	0	0	0	0	0	0	0	0	No..	No..	200	15,500	$350	15	1453
13	26	0	0	0	2	1	2	4	7	Yes.	No..	450	14,100	6,089	30	1454
10	15	0	0	2	0	0	0	0	0	Yes.	No..	25	5,150	75	27	1455
35	65	0	0	.....	.....	.....	.....	0	7	No..	Yes.	50	27,100	.....	.....	1456
23	80	0	0	.....	.....	.....	.....	2	14	Yes.	No..	500	20,292	4,218	124	1457
17	36	0	0	0	0	4	3	5	6	No..	Yes.	225	20,150	14,208	.....	1458
17	31	0	2	.....	.....	.....	.....	2	4	No..	No..	328	30,000	.....	.....	1459
13	7	1	1	.....	.....	.....	.....	1	7	No..	No..	27	5,150	2,500	.....	1460
10	15	0	0	.....	.....	.....	.....	.....	.....	No..	No..	20	7,000	183	.....	1461
15	11	0	0	0	0	15	11	3	6	No..	No..	0	20,000	.....	.....	1462
25	30	0	0	4	3	0	0	1	0	No..	No..	0	.....	.....	.....	1463
3	13	0	0	0	0	.....	.....	3	4	No..	No..	.....	.....	.....	.....	1464
16	19	0	0	0	0	1	0	2	0	No..	No..	50	1,100	.....	.....	1465
34	60	0	0	6	2	1	0	5	16	No..	No..	200	3,000	3,400	115	1466
100	119	0	0	8	14	2	0	6	10	Yes.	No..	.....	100,000	.....	450	1467
49	92	0	0	5	14	10	0	5	15	No..	No..	100	10,400	200	75	1468
45	0	0	0	12	0	6	0	5	0	No..	No..	.....	7,300	.....	150	1469
20	60	0	0	4	0	0	0	4	3	No..	No..	200	50,200	0	.....	1470
11	21	0	0	0	0	0	0	1	2	Yes.	No..	0	12,050	0	125	1471
9	24	0	0	0	0	.....	.....	2	6	No..	No..	21	4,515	0	12	1472
25	35	0	0	6	1	.....	.....	5	6	No..	No..	1,000	500	.....	96	1473
11	24	0	0	1	0	1	0	0	0	Yes.	No..	125	3,075	600	15	1474
9	4	0	0	0	0	0	0	0	4	No..	No..	0	5,150	.....	.....	1475
21	25	1	0	0	0	.....	.....	4	2	Yes.	No..	0	125	.....	250	1476
13	14	0	0	0	0	.....	.....	2	4	No..	No..	50	12,200	.....	.....	1477
24	31	0	0	6	8	8	8	3	8	Yes.	Yes.	350	12,300	.....	.....	1478
8	12	0	0	0	0	.....	.....	3	5	No..	No..	200	8,025	.....	.....	1479
47	51	0	0	8	5	14	0	7	9	Yes.	No..	300	50,580	.....	270	1480
13	45	0	0	0	0	1	1	2	5	No..	No..	0	27,075	.....	55	1481
25	25	.....	.....	1	0	9	0	9	6	Yes.	No..	100	20,100	.....	450	1482
25	30	0	0	8	2	5	2	1	4	No..	No..	200	35,200	.....	200	1483
91	122	0	0	9	14	6	4	9	21	No..	No..	100	51,000	.....	.....	1484
12	19	0	0	0	0	0	0	0	0	No..	No..	0	20,000	.....	12	1485
30	35	0	0	5	2	10	4	1	6	No..	No..	250	8,100	.....	.....	1486
54	60	0	0	5	5	.....	.....	2	12	Yes.	No..	227	111,200	.....	144	1487
12	21	.....	.....	.....	.....	.....	.....	3	4	No..	No..	0	8,100	.....	150	1488
23	35	0	0	4	3	0	0	2	4	No..	No..	150	8,125	.....	500	1489
27	33	0	0	3	0	10	0	6	6	No..	No..	10	17,300	108	5	1490
38	40	0	0	2	2	2	0	0	0	No..	No..	30	17,000	.....	.....	1491
60	75	0	1	8	5	.....	.....	12	14	No..	Yes.	500	700	.....	250	1492
31	55	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	.....	.....	1493
16	19	0	0	0	0	.....	.....	0	0	Yes.	No..	25	25	500	8	1494
15	11	0	0	0	0	.....	.....	4	3	No..	No..	50	5,100	.....	54	1495
29	48	0	0	5	0	0	0	3	2	No..	No..	1,067	13,750	.....	245	1496
10	10	0	0	0	1	0	0	1	1	No..	No..	0	5,025	250	24	1497
18	22	0	0	.....	.....	.....	.....	4	6	No..	No..	75	2,100	0	40	1498
20	34	0	0	4	2	.....	.....	6	5	No..	No..	100	10,050	.....	.....	1499
30	58	0	1	0	0	10	5	6	2	Yes.	No..	1,074	35,250	.....	.....	1500
22	30	0	0	4	6	4	6	1	0	Yes.	No..	0	3,000	1,195	.....	1501
15	23	0	0	0	0	0	0	6	7	No..	No..	350	10,085	6,000	78	1502
34	38	.....	.....	0	0	1	0	3	6	Yes.	No..	0	10,200	2,870	.....	1503

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	NEW JERSEY—cont'd.				
1504	Caldwell	High School (department)	C. E. Hedden	1	1
1505	Cranford	High School	R. E. Clement	1	1
1506	East Orange	do	E. R. Pennoyer	2	3
1507	Elizabeth	Battin High School	Miss L. H. Sayre	0	5
1508	Freehold	High School (department)	John Enright	2	0
1509	Gloucester	High School	Wm. Dougherty	1	3
1510	Hackettstown	do	A. H. Skinner	2	1
1511	Hightstown	Hightstown Academy	Theo. Green	1	a5
1512	Hoboken	High School	Wm. H. Elston	3	3
1513	Jersey City	do	W. S. Sweeny	4	8
1514	Keyport	High School (department)	S. V. Arrowsmith	1	1
1515	Millville	High School	T. D. School	1	1
1516	Montclair	do	Randall Spaulding	3	2
1517	Mount Holly	do	Chas. D. Raine	1	1
1518	Newark	do	E. O. Hovey	9	16
1519	New Brunswick	do	Ellis Apgar, Superintendent.	(6)	
1520	New Egypt	do	Geo. H. Johnson	1	1
1521	Newton	High School (department)	J. D. Reynolds	1	a7
1522	Orange	High School	Usher W. Cutts	2	1
1523	Passaic	do	H. H. Hutton, PH. D	1	2
1524	Paterson	do	L. H. White	1	8
1525	Phillipsburg	do	Milton Aten	2	1
1526	Plainfield	Stillman High School	Miss Julia E. Bulkley	1	3
1527	Rahway	High School (department)	C. B. Shallow	1	1
1528	Red Bank	High School	Richard Case, A. M.	1	2
1529	Roselle	High School, No. 25	Wm. C. Armstrong	1	0
1530	do	High School, No. 4	Irving P. Towne	1	1
1531	Salem	High School	E. S. Richards	1	1
1532	Somerville	do	Jno. S. Haynes	2	2
1533	South Amboy	High School (department)	Miss M. L. Thomas	0	1
1534	South Orange	High School	E. C. Sherman, A. M	1	1
1535	Summit	High School (department)	E. A. Chapman	1	1
1536	Toms River	do	James D. Dillingham, PH. D., A. M.	1	0
1537	Trenton	High School	Wm. H. Brace, A. M.	1	5
1538	Westfield	do	E. Francis	1	1
1539	Woodbridge	High School (department)	A. H. Wilson	1	2
	NEW YORK.				
1540	Afton	Union School and Academy.	A H. Knapp	1	1
1541	Akron	Union School	Orson Warren	1	1
1542	Albany	High School	Oscar D. Robinson	10	14
1543	Albion	do	Freeman A. Greene	1	4
1544	Arcade	Union School	J. M. McKee	1	1
1545	Attica	Union School and Academy.	Thomas B. Lovell	1	3
1546	Auburn	Academic High School		(11)	
1547	Bainbridge	Union School and Academy.	Fred. J. Turnbull, A. M.	1	1
1548	Baldwinsville	Free Academy	Isaac N. Failor	1	3
1549	Batavia	Union School	Gardner Fuller	1	5
1550	Bath	Union Free School, district No. 6.	Geo. H. Quay	1	2
1551	Belfast	Genesee Valley Seminary and Union School.	E. S. Redman	1	1
1552	Binghamton	Central High School	Eliot R. Payson	3	6
1553	Boonville	Union School and Academy.	James D. Rogers	1	3
1554	Brookfield	do	Leon C. Ball	1	5
1555	Brooklyn	The Central School	Calvin Patterson	20	39

a Also give instruction in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
16	16	1	0	2	7	1	0	3	4	Yes.	No..	86	$20,050	$3,340	$350	1504
9	16	0	0	0	0	1	0	5	8	Yes.	No..	85	20,075	5,407	.....	1505
95	69	0	0	.....	.....	.....	.....	.....	.....	No..	No..	500	400	400	.....	1506
30	63	1	0	.....	.....	.....	.....	5	11	Yes.	No..	230	50,040	.....	.....	1507
18	17	.....	.....	0	0	5	0	0	8	Yes.	No..	75	23,250	5,000	650	1508
20	25	0	0	0	0	0	0	0	0	No..	No..	10	5,050	.....	.....	1509
18	32	0	0	0	0	.....	.....	0	0	No..	No..	75	200	3,850	.....	1510
8	20	.....	.....	.....	.....	.....	.....	0	1	Yes.	No..	50	6,000	3,000	.....	1511
49	139	0	0	2	0	1	0	6	20	Yes.	No..	.....	48,225	.....	100	1512
143	315	2	4	6	4	.....	.....	24	55	Yes.	No..	500	7,000	10	.....	1513
28	26	7	11	0	0	.....	.....	5	6	No..	No..	808	25,100	5,300	.....	1514
30	40	.....	.....	.....	.....	.....	.....	5	8	No..	No..	200	.....	.....	.....	1515
60	76	1	0	8	5	3	0	4	7	No..	No..	506	.....	.....	.....	1516
31	31	.....	.....	.....	.....	.....	.....	2	13	Yes.	.....	47	15,150	.....	.....	1517
362	563	10	2	80	13	20	.....	51	50	Yes.	No..	1,200	.....	.....	.....	1518
90	137	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1519
40	35	0	0	1	3	.....	.....	2	3	Yes.	No..	100	4,000	881	.....	1520
12	6	1	1	3	0	.....	.....	0	0	No..	No..	0	50,075	5,150	.....	1521
19	51	0	0	3	3	.....	.....	0	12	Yes.	No..	427	40,200	.....	281	1522
35	65	0	0	0	0	35	65	5	6	Yes.	No..	204	40,200	.....	300	1523
56	250	1	0	0	0	5	0	12	43	Yes.	No..	1,800	100,075	13	.....	1524
31	46	0	0	0	0	.....	.....	4	9	.....	No..	200	20,020	.....	120	1525
69	60	1	0	.....	.....	.....	.....	7	11	No..	No..	1,050	32,500	.....	1,848	1526
5	18	.....	.....	2	0	3	18	.....	.....	No..	No..	100	40,200	.....	95	1527
18	24	0	1	0	0	.....	.....	0	6	Yes.	No..	400	23	.....	120	1528
7	8	0	0	0	0	3	0	.....	.....	Yes.	No..	200	10,000	4,200	.....	1529
4	12	0	0	.....	.....	.....	.....	0	0	Yes.	No..	244	15,085	10	.....	1530
12	35	.....	.....	.....	.....	.....	.....	2	8	.....	.....	.....	100	.....	.....	1531
23	33	.....	.....	0	0	.....	.....	4	13	Yes.	No..	104	15,129	9,169	198	1532
10	20	0	0	.....	.....	.....	.....	4	13	No..	No..	720	12,025	2,500	.....	1533
10	18	9	6	0	2	4	0	1	5	Yes.	No..	200	.....	.....	72	1534
13	10	0	0	0	0	.....	.....	3	2	Yes.	No..	361	15,200	5,000	20	1535
22	26	0	1	2	1	2	0	0	0	Yes.	No..	250	2,520	1,462	25	1536
16	77	2	5	.....	.....	16	77	3	22	No..	No..	300	30,280	8,350	.....	1537
20	25	0	0	.....	.....	.....	.....	2	2	Yes.	No..	250	.....	.....	.....	1538
12	18	.....	.....	.....	.....	3	1	3	7	Yes.	No..	76	40,075	5,044	60	1539
20	23	0	0	.....	.....	.....	.....	3	2	Yes.	No..	439	5,475	1,108	409	1540
24	42	.....	.....	.....	.....	2	2	2	2	Yes.	No..	450	13,000	833	141	1541
256	442	2	1	.....	.....	.....	.....	22	44	Yes	No..	6,448	20,119	3,201	1,532	1542
48	57	.....	.....	33	46	15	11	5	6	Yes.	No..	4,333	30,964	1,308	974	1543
21	22	0	0	6	0	15	22	5	1	Yes.	No..	137	11,267	2,368	306	1544
21	30	2	0	4	0	1	6	0	0	Yes.	Yes.	1,606	20,430	355	584	1545
145	231	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1546
28	35	0	1	1	0	2	3	1	3	Yes.	No..	825	13,770	3,809	295	1547
36	31	0	0	5	8	6	10	3	3	Yes.	No..	941	17,850	549	300	1548
59	78	0	0	8	12	10	0	8	16	Yes.	No..	10,500	90,800	6,000	625	1549
4	6	2	4	0	0	0	0	.....	.....	Yes.	No..	1,080	15,300	1,461	51	1550
8	17	0	1	4	2	5	4	1	2	Yes.	No..	300	6,100	801	369	1551
145	182	0	1	10	3	0	0	6	10	No..	No..	6,736	80,980	9,989	644	1552
13	32	0	0	3	0	1	2	0	5	Yes.	No..	500	4,300	1,700	650	1553
51	61	0	0	10	2	4	6	6	9	Yes.	No..	500	4,654	1,165	400	1554
367	1,167	11	20	25	30	25	40	64	0	Yes.	No..	600	305,000	100,000	.....	1555

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	NEW YORK—cont'd.				
1556	Buffalo	High School	Henry P. Emerson, A. M.	8	15
1557	Cambridge	Union School (Cambridge)	Edwin S. Harris, A. M	1	1
1558	do	Putnam Union School	John M. Furman	1	0
1559	Camden	Union Free School	D. D. Van Allen, A. M	1	1
1560	Canandaigua	Union School	H. L. Taylor, PH. D.	1	4
1561	Canaseraga	do	Arthur T. Emory	1	4
1562	Canastota	Union Free School	George H. Ottaway	1	1
1563	Candor	Free Academy	J. Nelson Shumway	1	1
1564	Canton	Union School	George M. Smith	1	3
1565	Catskill	Free Academy	Henry B. Coons, A. M	2	2
1566	Cattaraugus	Union Free School and Academy.	W. O. Robinson	1	1
1567	Champlain	Champlain Academy and Union Free School, district No. 1.	Matthew S. Quinn	1	2
1568	Chateaugay	Academy and Union Free School.	M. F. Perry	1	2
1569	Cherry Valley	Lancaster Graded School	C. Keller	2	0
1570	Chester	Union School	F. M. Wilson	1	2
1571	Chittenango	Yates Union Free School and Academy.	James G. Riggs	1	2
1572	Clarence	Parker Union School	E. A. Parks	1	3
1573	Cobleskill	High School	H. H. Snell	1	2
1574	Cohoes	Egbert's High School	Geo. E. Dixon	1	2
1575	Cooperstown	Union School, academic department.	John G. Wight	1	4
1576	Coxsackie	Academy and Union Free School.	Geo. Wm. Fairgrieve, A. B.	1	1
1577	Cuba	Union School	J. E. Dewey	1	6
1578	Danville	do	F. J. Diamond	2	2
1579	De Ruyter	Union School and Academy	E. A. Winchell	1	3
1580	Dryden	do	Charles Fowler	1	4
1581	Dunkirk	Union School	Albert Leonard	1	3
1582	East Bloomfield	do	J. S. Gibbs	1	3
1583	East Syracuse	Union School, academic department.	S. McK. Smith	1	2
1584	Elizabethtown	Union School	H. D. Hoffnagle	1	2
1585	Ellenville	Union Free School and Academy.	F. A. Woodward	1	4
1586	Ellicottsville	Union School	Chas. E. Marshall	1	1
1587	Ellington	Academy and Union School	A. H. Hiller	1	2
1588	Elmira	Elmira Free Academy	Herbert M. Lovell	1	6
1589	Fairport	Classical Union School	Floyd J. Bartlett	1	2
1590	Fayetteville	Union Free School	A. D. Whitney	1	3
1591	Flushing	High School	John H. Clarke	1	5
1592	Fort Covington	Free Academy	W. S. Flint	1	2
1593	Fort Edward	Union School	T. S. Vickerman, A. M	1	2
1594	Frankfort	Union Free School	Frank S. Tisdale	1	1
1595	Frewsburg	Union School	J. R. Flagg	1	3
1596	Friendship	Academy and Union School	A. H. Lewis, PH. M	1	4
1597	Fulton	Union Free School and Academy.	B. G. Clapp	1	4
1598	Geneva	Classical and Union School	W. H. Truesdale	1	4
1599	Glens Falls	Union Free School, No. 1	Sherman Williams	1	5
1600	Gloversville	Union School, academic department.	Henry A. Pratt	1	2
1601	Gouverneur	Seminary and Union Free School.	James F. Tuthill	2	2
1602	Gowanda	Union School and Academy	J. H. Selden	1	7
1603	Greene	do	Maurice E. Page	1	1
1604	Greenport	Union High School	D. L. Bardwell, A. M	1	2
1605	Greenwich	High School	C. L. Morey	1	2
1606	Groton	Union School	Wm. E. Lockner	1	2
1607	Hamilton	do	Charles H. Van Tuyl	1	2
1608	Hammondsport	do	E. E. Cates	1	4

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students whograduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
327	453									No	No	1,490	$152,000	$3,978	$160	1556
35	25	0	0	40	10	18	6	46	54	Yes	No	3,365	10,500	400	650	1557
14	15	0	0	1	0	3	2	2	2	No	No	287	2,285	56	70	1558
40	60			4	0	0	0	0	0	No	No	60	10,290	1,520	460	1559
47	75	0	0	10	4	30	6	3	1	Yes	No	1,900	65,500	5,324	908	1560
44	50	2	10	4	0			1	2	No	Yes	600	10,100	750	300	1561
5	30	0	0					1	1	Yes	No	750	20,954	2,421	400	1562
15	30	0	0	3	1			4	2	Yes	No	500			98	1563
30	20	1	0	0				0	0	No	No	700	30,500	2,171	630	1564
34	73	0	0							Yes	No	2,155	34,050	3,157		1565
25	24	0	0	2	1	8	3	3	1			500	17,000	900		1566
14	12	0	0	9	3	0	0	1	2							
12		0	0	1	2	4	1	4	0	Yes	No	210	12,530	440	300	1567
17	23	0	0	0	0	0	0	0	4						89	
37	24	0	0	1	0	0	0	0	0	No	No	350	15,400	200		1568
	35	12	3	3	2	2	0	2	0						400	
13		0	0			10	12	2	2	Yes	No	225	2,920	500		1569
38	20	0	0	2	2	4	2	2	1	Yes	No	947	3,962			1570
11	32					2	0	1	1	Yes	No	1,200	12,350	600		1571
40	44			3	1	8	3	0	0						457	
	49	0	0					7	5	Yes	No	1,075	11,700	3,225		1572
15				3	3	0	0	4	4	Yes	No	287	23,646	2,132	433	1573
	25	10	10												565	
25	30			4	3	4	0			No	No	2,783	29,359	3,267		1574
20	49	5	5					5	5						817	1575
33	48	1	0	5	5	10	15			Yes	No	613	29,417	1,623		
24	26			2	0	0	0	1	2						135	1576
22	49	0	2	1	0			4	0	No	No	240	16,270	1,235		
37	42			5	0	5	1	2	2	No	No	1,175	34,835	2,102	425	1577
11	27	5	3							Yes	No	241	5,100	831	308	1578
		3	3	2	0	3	0	2	0	No	Yes	628	6,475	878	281	1579
16	30														467	1580
22	41	0	0	3	0	1	5	6	1	Yes	No					1581
		0	0							No	No	500	4,450	610	200	1582
18	24			4	0	1	6	1	5			790	6,550	1,749	66	1583
12	27	0	0			10	20	1	2	No	No					
107	112	2	1	1	0			0	0	Yes	No	200	2,800			1584
35	55	1	2	8	4			0	11	No	No	410	5,459			1585
21	44	1	2	0	4	3	0	1	0	Yes	No			713	187	
56	103	1	1	12	20	16	7	13	7	Yes	No	31	20,080			
30	80	2	2	15	3	46	28	3	28	No	No	430	3,709	771	110	1586
12	21	2	0	3	12	10	8	1	8	Yes	No	1,701	8,336	1,404	162	1587
7	23	0	0	0		21	1	4	1	No	No	250	35,150	1,577	329	1588
37	44	0	0	0	0	15	12	2	2	Yes	No	1,204	25,610	2,500	650	1589
60	89	0	0	0	0	7	2	3	3	Yes	No	2,000	65,775	1,633	69	1590
101	120	0	0	0	0	12	8	0	0	No	No	300	8,385	9,816	1,743	1591
				4	0	3	2	4	4	Yes	No	1,169	11,535	1,000		1592
				0	0	6	5	0	0	Yes	No	605	17,031	2,028	344	1593
55	65	3	0	10	3	8	5	4	8	Yes	No	0	3,025	2,511		1594
38	64	0	0	1	0			0	0	Yes	No	200	2,625		200	1595
34	48			20	4	15	10	8	4	No	No	1,200	66,100	500	125	1596
		0	0	4	3	0	0	5	4					780	600	1597
52	98			3	0	3	2	1	4	Yes	No	2,800	30,100	5,287	1,300	
		0	0							Yes	No	761	27,218			
53	76			5	0			3	8	Yes	No	372	987	1,902	500	1598
24	34	0	0												320	1599
29	30	0	0	2	1	3	2	1	1	Yes	No	502	15,803		155	1600
43	47	13	0	4	0	0	0	2	1					3,626		
28	24	0	0	0	0	2	2	1	2	Yes	No	700	15,500		827	1601
15	20	1	0	15	0	0	0	7	4	Yes	No	1,200	8,029	1,400		
40	35	0	0	0	0	2	0	5	5	Yes	No		20,600	550	400	1602
				3	0	30	10	4	2	No	No	1,300	26,200	1,799	165	1603
								4	4	Yes	No	1,000	12,465	575	261	1604
								4	2	Yes	No	500	10,400	1,274	800	1605
										No	No	450	10,500	1,400	227	1606
														980	350	1607
															111	1608

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	NEW YORK—cont'd.				
1609	Hancock	Union School and Academy	Lincoln R. Long	1	2
1610	Hempstead	Union Free School	A. C. Almy	1	1
1611	Herkimer	Union School, academic department.	A. G. Miller	1	2
1612	Holland Patent	Union School	W. S. Knowlson	1	3
1613	Holley	Union School and Academy	Willis E. Bond	1	2
1614	Homer	Homer Free Academy	Wm. H. Cummings	1	2
1615	Hoosick Falls	Union Free School	John E. Shull	2	1
1616	Hornellsville	Free Academy	W. R. Prentice	0	5
1617	Hudson	High School	Romiett Stevens	0	2
1618	Huntington	Union School	Chas. W. Jennings	1	3
1619	Ilion	Ilion Academy	Judson I. Wood	1	5
1620	Ithaca	High School	Lewis H. Tuthill, A. M	3	5
1621	Jamestown	do	R. R. Rogers	3	3
1622	Johnstown	do	Wm. S. Snyder	1	2
1623	Jordon	Free Academy	John W. Chandler	1	2
1624	Keeseville	Union Free School	J. B. Flett	1	1
1625	Kingston	Kingston Free Academy	Francis J. Cheney	2	7
1626	Leonardsville	Union Free School	Chas. H. Weller	1	2
1627	Limestone	Union School and Academy	J. M. Grimes	1	3
1628	Lisle	Lisle Academy	Geo. B. Benedict, A. M	1	2
1629	Little Falls	Union School	Prof. S. A. Watson	1	2
1630	Little Valley	do	G. W. Boyce	1	2
1631	Lockport	Union School, academic department.	Asher R. Evans	4	3
1632	Lyons	Union School	W. H. Kinney	4	1
1633	McGrawville	do	C. M. Bean	1	2
1634	Madison	Union Free School and Academy.	J. T. Badgley, A. B	1	2
1635	Malone	Franklin Academy	E. D. Merriman	2	3
1636	Manlius	Union School	Geo. E. Bullis	1	6
1637	Marathon	Union School and Academy	U. G. Weatherly	1	a5
1638	Massena	do	M. H. Kinsley	1	1
1639	Mayville	Union School	W. M. Peirce	1	2
1640	Medina	Medina Free Academy	Charles E. Allen	1	3
1641	Middleburg	Academy and Union School	R. S. Keyser, A. M., PH. D	1	a6
1642	Middletown	Wallkill Free Academy	Henry H. Roberts	1	6
1643	Mohawk	Union School and Academy	W. E. Stearns	1	2
1644	Montgomery	Union Free School	Reuben Fraser	1	4
1645	Moravia	Union School	J. D. Bigelow	1	2
1646	Morris	Union School and Academy	W. D. Johnson	1	4
1647	Mount Morris	Union Free School and Academy.	Frank F. Cudebre	1	9
1648	Naples	Union Free School	F. Yale Adams	1	2
1649	Newburg	Free Academy	James M. Crane	5	3
1650	New York	East Side Evening High School (73 West 131st st.).	W. F. Hudson	24	0
1651	do	Harlem Evening High School (235 East 125th st.).	Elijah A. Howland	26	0
1652	do	Evening High School (124 West 30th st.	Jacob T. Boyle	24	0
1653	Niagara Falls	Union School	N. L. Benham	1	4
1654	Nichols	do	Irving F. Stetler	1	1
1655	North Brookfield	Union School and Academy	F. W. Crumb, A. M	1	3
1656	North Tarrytown	Union Free School	N. H. Dumond	1	1
1657	Norwood	Union School and Academy	Edward F. McDonald	1	1
1658	Nunda	Union School	W. A. Stewart	1	5
1659	Ogdensburg	Free Academy	Barney Whitney	2	3
1660	Olean	Union School			
1661	Oneida	do	F. W. Jennings, A. M	1	4
1662	Oneonta	do	N. N. Bull, A. M., acting principal.	1	3
1663	Oswego	High School	C. W. Richards	1	5

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
18	27	0	0	5	1	3	1	4	0	Yes.	No..	360	$6,867	$961	$394	1609
25	35	28	20	0	0	.....	.....	3	5	Yes.	Yes.	1,200	30,075	2,000	100	1610
40	33	.....	.....	2	3	2	0	3	6	No..	No..	300	25,405	1,972	65	1611
53	64	0	0	2	0	0	0	7	8	Yes.	No..	1,100	10,250	647	600	1612
7	8	0	0	1	0	2	7	.....	.....	Yes.	No..	434	13,300	1,215	243	1613
18	33	0	0	10	0	8	38	3	1	No..	No..	1,500	50,300	.....	.....	1614
32	45	0	0	4	3	.....	.....	7	13	Yes.	No..	1,214	54,984	4,973	472	1615
29	37	.....	.....	1	1	.....	.....	5	24	Yes.	No..	1,037	73,629	6,727	249	1616
17	33	0	0	5	0	12	33	2	6	Yes.	No..	.....	28,580	12,568	.....	1617
30	55	12	18	5	0	1	0	4	3	Yes.	No..	1,009	15,600	2,200	1,100	1618
34	63	0	0	0	0	.....	.....	19	3	Yes.	No..	153	30,800	5,000	600	1619
113	157	21	12	6	2	59	19	16	29	No..	No..	1,816	61,219	2,865	1,886	1620
87	129	3	2	19	10	.....	.....	9	19	No..	Yes.	2,459	101,540	.....	1,205	1621
55	65	0	0	8	9	50	53	0	9	No..	No..	3,500	50,250	1,000	200	1622
32	38	3	4	1	0	1	1	2	4	Yes.	No..	1,140	9,670	3,147	415	1623
10	20	.....	.....	1	0	.....	.....	.....	4	No..	No..	1,064	7,915	1,149	131	1624
72	114	.....	1	10	2	.....	1	7	17	No..	No..	.....	54,243	4,987	978	1625
10	27	.....	.....	.....	.....	.....	.....	2	4	No..	No..	126	3,000	630	75	1626
40	20	0	0	4	2	1	2	2	2	Yes.	No..	500	7,215	950	115	1627
14	19	0	0	6	0	.....	.....	0	4	Yes.	No..	309	6,731	755	103	1628
47	47	0	0	6	0	0	0	4	7	No..	No..	2,300	13,079	2,658	359	1629
10	15	.....	.....	.....	.....	.....	.....	3	4	Yes.	No..	300	15,000	400	90	1630
99	132	0	0	7	5	.....	.....	4	8	No..	No..	527	.....	.....	2,738	1631
52	48	1	0	9	0	1	0	2	6	No..	No..	1,500	59,649	3,601	333	1632
18	23	.....	.....	.....	.....	2	3	0	6	No..	No..	168	5,300	624	91	1633
36	44	0	0	0	0	0	0	0	4	No..	No..	500	3,300	.....	374	1634
45	55	0	0	2	0	10	15	6	10	No..	No..	.....	40,780	1,280	1,005	1635
42	48	0	0	0	0	2	0	2	3	Yes.	No..	571	5,125	1,183	843	1636
9	8	2	0	3	0	1	0	2	3	No..	No..	300	.....	.....	.....	1637
10	15	.....	.....	.....	.....	3	0	4	5	Yes.	No..	400	20,000	1,230	301	1638
37	44	0	0	2	1	2	6	1	3	Yes.	No..	650	26,275	1,182	276	1639
39	40	0	0	5	1	18	12	6	12	Yes.	No..	700	8,795	1,292	673	1640
40	33	3	5	6	1	6	0	4	4	Yes.	No..	750	21,500	.....	.....	1641
45	55	1	1	2	1	.....	.....	4	7	Yes.	No..	5,000	15,300	6,500	400	1642
10	20	0	0	1	0	.....	.....	2	2	Yes.	No..	815	5,695	1,542	88	1643
25	50	2	4	4	3	.....	.....	5	9	Yes.	No..	500	10,500	900	1,000	1644
48	58	1	0	3	2	.....	.....	5	5	Yes.	No..	759	13,200	.....	.....	1645
27	25	0	0	0	1	10	15	7	7	Yes.	No..	729	3,045	1,096	557	1646
100	100	1	1	20	20	40	50	3	1	No..	No..	1,200	20,100	2,500	150	1647
16	20	0	1	6	7	.....	.....	4	6	Yes.	No..	1,433	26,415	1,725	248	1648
93	110	1	0	10	5	3	0	19	22	Yes.	No..	17,000	81,500	.....	525	1649
1,770	0	0	0	0	0	.....	.....	.....	.....	No..	No..	0	250,300	.....	.....	1650
1,550	0	1	0	.....	.....	.....	.....	.....	.....	Yes.	No..	0	175,000	17,020	.....	1651
1,906	0	.....	.....	0	0	.....	.....	31	0	No..	No..	0	165,000	.....	.....	1652
53	78	5	2	.....	.....	.....	.....	2	3	No..	No..	4,000	41,029	2,910	147	1653
4	8	1	0	.....	.....	.....	.....	0	0	Yes.	No..	380	4,225	634	60	1654
49	69	.....	.....	5	2	1	0	2	0	Yes.	No..	400	4,200	490	196	1655
31	29	6	10	0	0	0	0	7	1	No..	No..	605	50,180	2,000	106	1656
30	40	0	0	2	0	20	15	7	2	Yes.	No..	537	18,575	3,275	265	1657
50	60	0	0	10	8	0	0	4	6	No..	No..	500	5,300	9,50	450	1658
99	134	0	0	.....	.....	.....	.....	9	11	No..	No..	4,053	39,927	5,720	694	1659
102	166	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1660
17	56	.....	.....	9	27	.....	.....	3	6	No..	No..	.....	15,650	2,819	565	1661
21	43	2	3	1	2	.....	.....	3	7	Yes.	No..	1,350	30,695	4,977	148	1662
82	139	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1663

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	NEW YORK—cont'd.				
1664	Ovid	Union School and Academy	S. G. Harris	1	4
1665	Owego	Free Academy	E. J. Peck	2	4
1666	Palatine Bridge	Union School	N. G. Kingsley	1	2
1667	Palmyra	Classical Union School	Geo. W. Pye	2	2
1668	Patchogue	Union Free School	W. E. Gordon	1	3
1669	Phelps	Union and Classical School	D. D. Edgerton	1	2
1670	Phœnix	Union School and Academy	Robt. Simpson, jr	1	5
1671	Pittsford	Union School	E. J. Howe	1	3
1672	Plattsburg	High School	Miss Helen D. Woodward	1	4
1673	Port Byron	Free School and Academy	Wm. L. Harris, A. B	1	2
1674	Port Chester	Union School (Free)	A. P. Thomas	1	1
1675	Port Jervis	Union School	J. M. Dolph	2	4
1676	Portville	do	W. H. Smith	1	4
1677	Poughkeepsie	High School	James Winne	2	8
1678	Prattsburg	Franklin Academy and Union Free School.	Curtis B. Miller	1	4
1679	Rhinebeck	Union School	T. S. Barnes	1	0
1680	Richfield Springs	do	J. A. Bassett	1	2
1681	Rochester	Free Academy	Jno. G. Allen	5	14
1682	Rome	do		(7)	
1683	Rushford	Union School	Edward Maguire	1	2
1684	Rushville	do	W. F. Du Bois	1	3
1685	Sag Harbor	do	John J. Harrison	1	1
1686	Salamanca	do	A. H. Sage	2	2
1687	Salem	Washington Academy	W. B. Harding	1	26
1688	Sandy Creek	High School and Academy	R. A. McDonald	1	67
1689	Sandy Hill	Union School and Academy	Frances A. Tefft	1	4
1690	Saratoga Springs	High School	Welland Hendrick	2	3
1691	Schenectady	Union Classical Institute	Chas. S. Halsey	1	5
1692	Schenevus	Union School and Academy	Floyd S. Lowell	1	2
1693	Schoharie	Academy and Union Free School.	Solomon Sias	2	1
1694	Schuylerville	Union Free School	Charles A. Black	1	2
1695	Seneca Falls	Mynderse Academy	A. C. McLachlan	1	7
1696	Sherman	Union School	J. H. Russell	1	66
1697	Sidney	High School	Thos. C. Wilbur, A. M	1	3
1698	Silver Creek	Union School and Academy	A. M. Preston	2	68
1699	Sinclairville	Academy and Union School	F. H. Hall	1	2
1700	Sing Sing	High School	Miss I. W. Bennet	0	3
1701	Skaneateles	Union School and Academy	H. Frank Miner	1	2
1702	Spencer	Union School	S. K. Marsh	1	1
1703	Springfield	Griffith Institute and Union Schools.	R. W. Hughes, A. M	1	3
1704	Stillwater	Union Free School	Alexander Falconer	1	1
1705	Stockholm	Brasher and Stockholm Union Schools.	Warren J. Cheney	1	2
1706	Syracuse	High School		1	17
1707	Tonawanda	North Tonawanda Union Schools.	A. D. Filer	2	2
1708	Troy	High School	Leigh R. Hunt	4	3
1709	Trumansburg	Union School	Henry D. Hopkins	1	1
1710	Union	Union School and Academy	H. T. Morrow	1	64
1711	Union Springs	High School	A. M. Seekell	1	1
1712	Utica	Utica Academy (free)	G. C. Sawyer	4	5
1713	Vernon	Union School	E. R. Adams, A. M	1	1
1714	Walton	do	J. R. Fairgrieve	1	3
1715	Warrensburg	Union Free School and Academy.	Fred N. Moulton	1	3
1716	Warsaw	Union School and Academy	Irving B. Smith, A. M	2	2
1717	Warwick	Warwick Institute	W. D. Smith	1	2
1718	Waterford	Union Free School	H. H. Loomis	1	2
1719	Waterloo	Union School	A. R. Sewell	1	3
1720	Watertown	High School	Frank D. Shaver	2	7

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
25	24	3	2	0	0	4	4	1	3	Yes.	No..	1,200	$15,600	$3,356	$95	1664
70	87	0	0	20	10	8	4	7	5	No..	No..	3,000	32,025	4,812	853	1665
11	4	0	0	5	0	1	1	0	0	Yes.	No..	1,000	5,500	600	30	1666
32	55	3	2	8	7	3	2	7	8	No..	Yes.	1,542	30,400	2,100	450	1667
50	76	2	1	0	0	2	0	5	5	Yes.	Yes.	860	20,350	2,000	358	1668
40	45	0	4	4	8	20	14	8	4	Yes.	No..	640	7,000	1,000	400	1669
60	74	0	0	1	9	13	38	0	7	Yes.	No..	490	16,997	2,500	230	1670
26	24	0	1	.....	.....	2	0	0	0	Yes.	No..	12	3,020	777	100	1671
46	43	0	0	6	4	2	0	2	9	Yes.	No..	250	5,512	3,000	700	1672
28	33	0	0	1	1	3	3	6	7	Yes.	No..	879	13,717	1,662	514	1673
22	26	0	1	0	0	.....	.....	0	7	Yes.	No..	2,300	35,100	2,142	440	1674
49	113	0	0	6	8	5	0	2	11	Yes.	No..	4,142	32,770	4,971	492	1675
25	32	1	0	8	16	16	20	1	0	No..	Yes.	555	3,567	.....	132	1676
61	132	0	4	2	2	3	6	3	11	No..	No..	16,287	43,194	797	125	1677
35	40	0	0	2	0	3	1	2	2	Yes.	Yes.	1,425	12,100	279	.....	1678
15	19	3	1	0	0	4	6	2	4	Yes.	No..	602	12,450	900	60	1679
30	46	4	5	1	10	0	0	1	0	Yes.	No..	477	25,407	2,525	415	1680
254	449	0	0	80	20	20	30	54	121	No..	No..	1,653	159,139	26,741	864	1681
92	103	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1682
20	28	2	2	0	0	1	0	1	0	Yes.	No..	260	3,224	530	245	1683
49	37	0	0	3	4	12	4	1	0	Yes.	No..	258	16,055	744	208	1684
11	33	5	4	0	0	1	0	0	4	Yes.	No..	250	18,280	1,400	15	1685
34	41	0	0	4	2	.....	1	2	11	Yes.	No..	769	42,600	3,300	300	1686
30	40	0	0	1	1	1	0	2	6	Yes.	No..	2,000	30,800	.....	600	1687
42	42	0	0	5	0	.....	.....	5	8	Yes.	No..	615	16,247	1,300	350	1688
40	60	0	0	10	0	10	10	7	1	Yes.	No..	1,004	25,500	2,312	348	1689
64	80	1	0	4	0	3	0	10	9	Yes.	No..	285	50,500	5,075	40	1690
80	108	0	0	32	9	16	5	19	24	No..	No..	515	16,934	4,655	1,200	1691
18	34	0	0	0	0	1	0	4	6	No..	No..	243	8,417	1,770	256	1692
37	21	0	0	10	7	7	0	3	2	Yes.	No..	669	15,532	.....	100	1693
15	19	0	0	7	6	.....	.....	0	1	No..	No..	677	19,575	1,462	635	1694
80	152	1	2	2	0	10	8	10	12	Yes.	No..	1,500	36,500	5,200	372	1695
13	21	0	0	.....	.....	.....	.....	4	4	Yes.	No..	800	10,400	1,469	369	1696
30	45	0	0	3	2	1	1	0	2	Yes.	No..	800	9,350	451	.....	1697
45	51	0	0	5	2	14	7	2	4	Yes.	No..	946	48,600	2,927	192	1698
18	24	0	0	2	1	2	2	3	3	No..	No..	345	7,730	918	422	1699
21	56	.....	.....	.....	.....	.....	.....	7	15	Yes.	No..	2,558	7,100	.....	125	1700
37	55	0	0	8	4	4	6	4	8	No..	No..	1,200	11,000	.....	733	1701
37	40	.....	.....	13	8	24	32	6	6	Yes.	No..	625	4,300	1,255	300	1702
69	88	0	1	12	16	57	72	8	9	No..	No..	300	21,671	2,942	673	1703
30	39	2	3	3	3	10	20	2	1	Yes.	No..	780	20,700	1,500	250	1704
20	25	.....	.....	0	0	5	3	3	3	No..	No..	600	10,600	809	202	1705
333	471	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1706
40	54	.....	.....	.....	.....	2	3	1	7	Yes.	No..	1,200	39,000	3,200	76	1707
92	140	0	1	28	5	0	0	5	28	Yes.	No..	1,000	20,500	2,200	1,130	1708
28	31	4	3	0	0	0	0	2	5	No..	No..	525	5,179	2,500	450	1709
15	20	1	0	3	3	.....	.....	2	3	No..	No..	500	5,000	750	225	1710
24	32	1	3	2	0	3	5	3	4	Yes.	No..	678	16,615	850	165	1711
102	141	0	0	26	5	.....	.....	9	24	No..	No..	908	76,371	1,665	550	1712
14	12	1	1	0	0	1	0	0	0	Yes.	No..	685	2,895	643	20	1713
55	75	2	5	13	5	.....	.....	2	2	Yes.	No..	1,200	10,000	.....	1,200	1714
49	55	0	0	2	1	6	11	0	0	Yes.	No..	498	8,150	.....	.....	1715
71	82	.....	.....	17	9	8	10	5	9	Yes.	No..	2,485	36,010	2,400	700	1716
10	16	6	6	1	0	0	0	1	7	Yes.	No..	846	11,630	1,616	431	1717
13	27	3	2	3	0	0	0	2	7	Yes.	No..	1,600	47,150	3,500	.....	1718
43	63	1	2	4	0	5	9	4	7	No..	No..	1,500	30,500	2,176	777	1719
124	126	0	0	20	3	.....	.....	11	13	Yes.	No..	4,000	23,500	7,548	564	1720

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	NEW YORK—cont'd.				
1721	Waterville	Union School and Academy	A. M. Wright	1	4
1722	Watkins	Academy and Union School	S. S. Johnson	1	a7
1723	Waverly	High School	P. M. Hull, A. M	1	2
1724	Webster	Classical and Union School	C. D. Child	1	3
1725	Weedsport	Union School	L. R. Hopkins	1	2
1726	Wellsville	Union School and Academy	L. M. Harding	2	1
1727	West Chester	Union School (free) No. 1	M. E. Delvin	2	0
1728	Westfield	Union School and Academy	A. N. Taylor	3	8
1729	West Hebron	Union School	Leland L. Landers	1	2
1730	Westport	do	Fred V. Lester	2	2
1731	West Winfield	do	Frank J. House	1	7
1732	Whitehall	do	John H. Kelley	1	2
1733	Whitneys Point	Union School and Academy	David H. Carver	1	1
1734	Wilson	Union Free School	Chas. L. Luther, A. M	1	1
1735	Windsor	Union School and Academy	Geo. R. Winslow	1	4
1736	Wolcott	Leavenworth Institute and Union Free School.	James E. Potter	1	3
1737	Woodhull	Union School	Frank H. Little	2	2
1738	Worcester	Union School and Academy	Calvin T. Northrop	1	1
1739	Wyoming	Middleburg Academy and Wyoming Union School.	Storrs Barrett	1	3
1740	Yonkers	High School	Edward R. Shaw, PH. D	2	4
	NORTH CAROLINA.				
1741	Globe	Globe Academy	W. F. Marshall	1	1
1742	Goldsboro	High School (department).	J. Y. Joyner, superintendent.	1	1
1743	New Berne	High School			
1744	Winston	High School (department).	Jno. J. Blair, superintendent.	1	2
	NORTH DAKOTA.				
1745	Bismarck	High School	O. P. Rider	1	3
1746	Devils Lake	do	L. B. Fancher	1	0
1747	Fargo	do	Miss Eliza A. Kent	(3)	
1748	Grand Forks	do	C. H. Clemmer	1	2
1749	Hillsboro	High School (department), District No. 1.	H. N. Matteson	1	0
	OHIO.				
1750	Ada	Union School	R. J. Kibler	5	2
1751	Akron	High School	Wilbur V. Rood	2	9
1752	Alliance	do	C. C. Davidson	2	2
1753	Amanda	do	L. L. Wagner	2	a2
1754	Andover	High School (department).	J. D. McCalmont	1	1
1755	Anna	High School	S. Wilken	1	3
1756	Antwerp	Special School District	A. L. De Long	3	a5
1757	Arcanum	High School	S. A. Miinich	1	0
1758	Archbold	High School (department).	Eli Wyse	1	0
1759	Ashland	High School	Miss B. F. Osborn	1	3
1760	Ashley	High School (department)	W. I. Crane	1	0
1761	Ashtabula	High School	Laurence Johnson	2	2
1762	Athens	do	C. S. Wheaton	1	2
1763	Attica	do	Geo. M. Hoke	2	0
1764	Bainbridge	do	Geo. W. Fry	1	0
1765	Basil	High School (department).	R. B. Bennett	2	1
1766	Batavia	High School	S. T. Dial	2	1
1767	Beaver Dam	High School (department).	R. P. Smith	2	a2
1768	Bellaire	High School	Miss A. Cunningham	1	4
1769	Bell Brook	Special School District	W. C. Wilson	1	1
1770	Belle Center	Union School	John Montgomery	2	a3

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
80	81	2	1	12	7	4	0	3	3	Yes.	No..	1,567	$31,300	$2,413	$1,165	1721
47	60	3	5	0	2	.....	.....	0	4	Yes.	No..	922	20,550	2,346	200	1722
94	119	0	0	2	2	0	0	4	12	Yes.	No..	722	27,210	4,363	.....	1723
40	33	1	0	2	2	2	6	2	0	Yes.	No..	210	5,500	738	557	1724
35	54	0	0	1	0	12	15	4	14	No..	No..	350	15,500	600	550	1725
30	60	0	3	6	3	1	1	5	5	Yes.	No..	715	17,500	1,793	426	1726
20	21	7	5	0	0	20	21	8	6	Yes.	No..	1,025	35,500	1,000	.....	1727
60	80	.....	.....	2	0	.....	.....	.....	7	Yes.	No..	2,000	79,000	.....	.....	1728
25	33	0	0	2	0	0	0	.....	.....	Yes.	No..	111	1,550	.....	314	1729
70	63	0	0	2	0	2	1	2	2	Yes.	No..	472	7,775	674	234	1730
65	75	0	0	7	0	0	0	4	4	No..	No..	635	.....	3,387	1,200	1731
16	31	.....	.....	.....	.....	2	0	2	7	Yes.	.....	1,224	25,420	10,748	66	1732
38	32	1	0	0	0	18	16	0	0	Yes.	No..	486	3,650	.....	.....	1733
43	51	0	0	2	0	1	2	3	2	Yes.	No..	1,000	9,600	1,150	370	1734
33	48	0	0	0	0	.....	.....	0	1	No..	No..	735	12,000	2,500	230	1735
42	41	0	0	20	11	2	2	3	3	Yes.	No..	514	16,611	1,521	219	1736
20	25	0	0	2	0	0	1	3	3	No..	No..	100	4,555	.....	150	1737
20	41	0	0	2	4	0	1	2	4	No..	No..	383	3,550	885	250	1738
54	41	0	0	6	2	0	0	1	4	No..	No..	1,004	6,600	567	300	1739
64	76	2	0	8	4	4	0	3	8	Yes.	No..	.....	500	.....	200	1740
35	20	0	0	20	0	.....	.....	0	0	No..	No..	300	1,400	.....	300	1741
37	52	0	0	2	6	.....	.....	2	9	No..	No..	1,100	75	.....	166	1742
60	65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1743
38	52	0	0	15	25	8	0	12	14	Yes.	No..	2,500	30,025	13,281	175	1744
14	19	1	3	.....	.....	.....	.....	0	0	Yes.	Yes.	75	40,050	1,957	43	1745
1	3	1	0	0	0	.....	.....	0	0	Yes.	No..	300	5,050	2,833	.....	1746
22	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1747
23	57	0	0	0	0	1	5	1	6	Yes.	No..	240	80,500	18,599	194	1748
4	6	0	0	2	0	0	0	0	0	No..	No..	150	4,000	.....	13	1749
42	59	0	0	12	15	3	6	7	9	No..	Yes.	200	20,000	7,600	15	1750
171	268	1	3	9	2	3	9	20	44	Yes.	No..	200	136,600	8,381	188	1751
51	81	0	0	0	0	0	0	8	18	Yes.	No..	1,200	60,150	.....	36	1752
10	12	0	0	0	0	0	0	3	2	No..	No..	0	3,500	200	1,400	1753
35	30	0	0	2	1	0	0	3	5	No..	No..	.....	250	12,000	163	1754
19	20	6	10	.....	.....	.....	.....	.....	.....	No..	No..	.....	12,000	3,600	72	1755
5	21	0	0	0	0	.....	.....	0	1	No..	No..	60	22,100	3,862	100	1756
2	8	0	0	0	0	1	4	0	0	No..	No..	100	8,000	2,500	30	1757
15	19	0	0	0	0	0	0	0	0	No..	No..	0	4,000	.....	0	1758
20	25	1	0	3	2	0	0	3	10	No..	No..	600	10,020	1,900	.....	1759
10	15	0	4	.....	.....	.....	.....	1	2	No..	No..	40	5,000	.....	.....	1760
17	33	0	0	.....	.....	.....	.....	3	6	No..	No..	300	700	.....	392	1761
28	59	25	35	2	0	0	2	2	8	Yes.	No..	275	30,100	8,000	85	1762
10	20	0	0	2	4	4	6	0	4	No..	No..	250	12,250	2,500	160	1763
16	15	.....	.....	1	1	.....	.....	2	5	No..	No..	0	8,100	.....	.....	1764
20	17	0	0	0	0	1	0	0	3	No..	No..	3	4,515	.....	27	1765
22	29	12	14	2	1	0	0	5	8	No..	No..	0	30,200	300	261	1766
5	4	0	0	0	0	0	0	4	2	No..	No..	0	5,050	.....	45	1767
40	33	0	3	1	1	.....	.....	3	11	Yes.	No..	30	25	.....	92	1768
5	11	0	0	2	3	0	0	1	5	No..	No..	150	2,200	1,200	.....	1769
3	26	0	0	0	1	0	0	0	9	No..	No..	200	15,100	3,009	42	1770

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	OHIO—continued.				
1771	Bellevue	High School (department)	E. F. Warner, superintendent.	1	1
1772	Belleville	do	J. J. Houser	1	a4
1773	Belmont	Special School District	S. C. Murphy	1	2
1774	Berea	High School	E. D. Lyons	1	1
1775	Blanchester	High School (department)	J. H. Rowland	1	0
1776	Bloomville	Union School	C. H. Shock	1	0
1777	Bluffton	High School	Clyde Akerman	2	a4
1778	Bowling Green	High School (department)	D. A. Haylor	1	1
1779	Brecksville	High School	S. P. Merrill, ex-principal	1	1
1780	Bucyrus	do	W. W. Spear	2	0
1781	Butler	Independence High School	L. L. Ford	1	0
1782	Caledonia	High School	W. V. Smith	1	0
1783	Cambridge	do	E. L. Abbey	5	a20
1784	Camden	High School (department)	Frank G. Shuey, superintendent.	2	a4
1785	Canal Fulton	High School	M. C. Lytle	1	1
1786	Canal Winchester	High School (department)	Thos. Fitzgerald	4	a3
1787	Canton	High School	Chas. A. Shaw	2	2
1788	Cardington	Union School	A. L. Banker	2	a7
1789	Carey	do	R. H. Morison	1	1
1790	Carlisle	High School	J. M. Lane	1	1
1791	Cedarville	Union School	C. S. D. Shawan	1	0
1792	Celina	High School	W. F. McDaniel	2	0
1793	Centerburg	High School (department)	S. H. Maharry	2	2
1794	Centerville	High School	L. G. Weaver	1	0
1795	Chagrin Falls	do	F. P. Shumaker, superintendent.	1	1
1796	Chardon	do	C. W. Fuller	2	1
1797	Chesterville	High School (department)	David Reese	2	1
1798	Chillicothe	High School	Reynold Janney	2	4
1799	Christiansburg	do	W. F. Gilmore	1	0
1800	Cincinnati	Hughes High School	E. W. Coy	6	9
1801	do	Woodward High School	Geo. W. Harper	6	12
1802	Circleville	High School	Miss E. C. Dunn	0	3
1803	Clarington	High School (department)	C. E. Githens	1	0
1804	Clarksville	High School	W. E. Barrett	2	1
1805	Cleveland	High School (central)	Edward L. Harris	13	17
1806	do	West High School	Theo. H. Johnston	8	9
1807	Clifton	Union School	—— Weaver	1	0
1808	Columbiana	High School	F. C. Roche	1	1
1809	Columbus	do	Abram Brown	10	11
1810	Columbus Grove	do	E. Ward, superintendent	1	6
1811	Conneaut	do	C. E. Carey	1	2
1812	Convoy	do	E. D. Witt Brothers	1	0
1813	Coolville	High School (department)	Albert Weatherbee	1	2
1814	Coshocton	High School	J. M. Yarnell	1	1
1815	Crown City	High School (department)	J. C. Ingels	1	1
1816	Cuyahoga Falls	High School	Fred. Schnee	1	2
1817	Danville	Danville and Buckeye City Union Schools.	W. S. Lynch	3	1
1818	Dayton	Central High School	Chas. B. Stivers	7	5
1819	Defiance	High School			
1820	De Graff	Union School	Joseph Swisher	1	1
1821	Delaware	High School	Miss H. M. Peirce	2	6
1822	Delphos	do		(2)	
1823	Delta	do	Miss H. O. Lemert	1	1
1824	Derby	do	Jerry Dennis	1	0
1825	Deshler	High School (department)	H. J. Gardner	1	0
1826	East Cleveland	High School	W. S. Hayden	1	1
1827	Eaton	do	J. P. Sharkey, superintendent.	2	1
1828	Elida	Union School	John Davison	1	2

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
21	51	1	4	2	0	6	7	6	11	No..	No..	309	$25,300	.....	$200	1771
15	16	0	0	.....	.....	.....	.....	2	2	No..	No..	250	.....	.....	.....	1772
14	23	0	3	0	2	.....	.....	.....	.....	No..	No..	100	7,100	.....	43	1773
20	32	0	0	0	0	0	0	5	7	No..	No..	475	22,050	$600	210	1774
11	15	2	1	.....	.....	.....	.....	1	5	No..	No..	100	10,000	.....	.....	1775
13	12	1	1	1	0	0	0	1	2	No..	No..	160	3,525	208	14	1776
13	13	0	0	0	1	.....	.....	1	5	No..	No..	150	16,150	760	68	1777
23	17	.....	.....	.....	.....	.....	.....	2	3	No..	No..	24	36,100	.....	190	1778
40	30	0	0	.....	.....	.....	.....	7	8	No..	No..	600	4,050	.....	75	1779
22	40	1	0	.....	.....	.....	.....	6	4	No..	No..	400	.....	.....	.....	1780
14	6	0	0	0	0	0	0	0	0	Yes.	No..	150	6,000	.....	38	1781
11	9	0	0	0	0	1	0	1	0	Yes.	No..	130	8,050	2,000	100	1782
46	47	17	20	20	21	26	26	7	8	No..	No..	1,000	70,100	.....	.....	1783
12	11	0	0	8	6	0	0	3	0	No..	No..	125	4,200	.....	50	1784
21	32	0	0	1	0	.....	.....	4	8	No..	No..	250	25,100	.....	.....	1785
30	12	0	0	1	0	2	0	.....	.....	Yes.	No..	0	10,000	.....	100	1786
30	80	1	0	0	0	15	17	6	20	Yes.	No..	1,200	150,400	.....	100	1787
18	18	4	2	2	1	0	0	5	5	No..	No..	50	40,050	.....	150	1788
6	15	0	0	1	1	0	0	1	1	No..	No..	100	25,100	8,042	19	1789
2	3	0	0	0	0	0	0	2	3	No..	No..	80	10,050	.....	105	1790
12	16	0	0	0	0	0	0	.....	.....	No..	No..	500	20,000	.....	216	1791
22	36	0	0	0	0	22	36	0	1	No..	No..	25	20,200	1,380	75	1792
25	15	.....	.....	.....	.....	.....	.....	1	0	No..	No..	500	5,200	.....	140	1793
18	18	.....	.....	.....	.....	.....	.....	0	0	No..	No..	.....	2,500	.....	.....	1794
35	29	1	0	3	5	4	2	3	8	No..	No..	215	20,200	8,500	300	1795
88	64	0	0	.....	.....	.....	.....	7	5	No..	No..	500	25,075	218	1,000	1796
19	11	0	0	6	2	.....	.....	2	0	No..	No..	75	6,650	1,250	50	1797
76	67	8	8	3	0	.....	.....	9	6	Yes.	No..	10,000	1,600	.....	96	1798
10	18	0	0	.....	.....	1	0	0	0	No..	No..	175	6,080	.....	.....	1799
252	417	9	17	35	8	.....	.....	23	43	No..	Yes.	2,000	50,000	.....	3,185	1800
391	401	7	17	61	12	335	345	36	45	No..	Yes.	3,000	109,000	.....	.....	1801
34	64	2	0	.....	.....	.....	.....	1	13	Yes.	No..	101	3,700	.....	250	1802
21	20	0	0	0	0	0	0	0	0	Yes.	No..	0	10,000	2,340	.....	1803
11	10	3	0	0	2	1	0	0	0	No..	No..	0	5,010	.....	.....	1804
492	809	6	6	51	26	.....	.....	22	73	No..	No..	.....	125,000	.....	.....	1805
130	280	0	0	14	4	21	43	5	31	Yes.	Yes.	50	116,500	.....	600	1806
13	5	8	6	0	0	0	0	0	0	Yes.	No..	100	8,150	1,975	103	1807
22	23	0	0	.....	.....	.....	.....	0	3	No..	No..	260	19,000	6,000	280	1808
284	536	.....	.....	.....	.....	.....	.....	15	80	No..	No..	.....	150,000	.....	.....	1809
14	32	0	1	.....	.....	.....	.....	2	4	Yes.	No..	350	18,100	4,045	12	1810
15	30	0	1	.....	.....	.....	.....	1	3	No..	No..	0	22,200	.....	300	1811
9	10	0	0	0	0	0	0	0	1	No..	No..	261	7,030	480	20	1812
17	18	0	0	1	0	0	0	0	0	No..	No..	.....	3,075	189	70	1813
18	61	8	11	4	5	3	3	3	5	No..	No..	847	75,350	8,790	85	1814
17	14	0	0	0	0	.....	.....	.....	.....	No..	No..	107	2,000	200	12	1815
24	33	0	0	.....	.....	.....	.....	3	8	No..	No..	.....	40,160	2,500	.....	1816
30	31	1	2	4	1	0	0	1	1	No..	No..	0	3,050	.....	40	1817
149	259	1	4	.....	.....	.....	.....	10	23	Yes.	No..	100	20,500	.....	.....	1818
29	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1819
12	32	1	2	6	4	6	10	5	5	No..	No..	250	20,000	.....	150	1820
60	120	1	1	20	40	.....	.....	14	20	No..	No..	1,000	.....	.....	300	1821
25	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1822
21	43	0	0	.....	.....	.....	.....	.....	.....	No..	No..	20	22,040	500	135	1823
11	11	0	0	0	0	0	0	0	1	Yes.	No..	12	2,510	500	.....	1824
13	10	.....	.....	.....	.....	.....	.....	.....	.....	No..	No..	150	15,250	4,000	50	1825
20	25	0	0	8	5	5	23	1	1	No..	Yes.	500	12,500	.....	125	1826
24	30	0	1	4	2	5	5	5	4	No..	No..	1,000	5,350	2,200	75	1827
61	53	0	0	0	0	.....	.....	0	0	No..	No..	0	10,500	2,160	150	1828

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	OHIO—continued.				
1829	Elyria	High School	Miss Ida C. Allen	1	3
1830	Findlay	do	J. F. Smith	1	3
1831	Florence	do	Job Fish	1	2
1832	Flushing	do	John C. Bethel	1	0
1833	Forest	Union School	C. F. Zimmerman	1	0
1834	Fort Recovery	High School (department)	J. C. Gibney	1	0
1835	Fostoria	High School	Miss L. T. Abbott	0	2
1836	Frazeysburg	do	E. E. Smock	1	0
1837	Fredericktown	do	C. W. Durbin	1	1
1838	Freeport	High School (department)	B. W. Rowland	1	2
1839	Fremont	High School	A. M. Hyde	3	1
1840	Galion	do	J. M. Talbott	1	0
1841	Gambier	do	W. A. Adams	1	0
1842	Garrettsville	do	J. J. Jackson	2	0
1843	Geneva	Geneva Normal School	J. S. Lowe	3	4
1844	Genoa	High School	W. D. Pepple	1	0
1845	Georgetown	High School (department)	J. E. Price	2	0
1846	Gettysburg	Special School District	John S. Royer	1	2
1847	Girard	High School	A. W. Kennedy	1	1
1848	Glendale	do	Chas. F. Dean	1	0
1849	Glenville	do	H. L. Cosgrove	1	1
1850	Good Hope	High School (department)	W. H. Clevenger	1	1
1851	Grafton	High School	D. M. Byam	2	2
1852	Grand Rapids	High School (department)	W. H. Richardson, superintendent.	1	2
1853	Granville	High School (department)	Horace A. Stokes	1	1
1854	Greenfield	Union School	Wm. G. Moler	1	2
1855	Greenville	High School	F. M. White	2	1
1856	Greenwich	Special School District	G. W. Walker	a2	3
1857	Groveport	High School (department)	J. A. Wilcox	1	0
1858	Hamden Junction	Hamden School	D. B. Dye	a1	4
1859	Hamilton	High School	W. P. Cope	2	3
1860	Harrisburg	High School (department)	W. V. Wright	1	2
1861	Harrison	High School	Chas. F. Stegmaier	1	2
1862	Hartford	do	H. F. Shontz, M. E.	1	1
1863	Hartwell	do	J. L. Trisler	1	2
1864	Hayesville	do	D. K. Andrews	1	1
1865	Hebron	High School (department)	F. E. Slabaugh	1	2
1866	Hicksville	High School	W. E. Bowman	1	1
1867	Highland	New Lexington High School.	R. B. Barrett	1	0
1868	Hilliards	High School (department)	James H. Brown	1	3
1869	Hillsboro	High School	E. G. Smith	3	1
1870	Hubbard	Central High School	L. L. Campbell	1	1
1871	Huntsville	High School	Asa Martin, jr	1	0
1872	Huron	do	B. B. Hall	1	1
1873	Ironton	do	Aaron Grady	1	2
1874	Jackson	do	John R. Smith	2	0
1875	Jacksontown	High School (department)	Everett Beeks, superintendent.	1	1
1876	Jamestown	do	Wm. Reece	a3	4
1877	Jeffersonville	High School	F. L. Miller	1	0
1878	Johnstown	do	M. C. Smith	1	1
1879	Junction City	High School (department)	Wm. J. Dunn	1	2
1880	Kalida	High School	H. T. Hooper	1	a3
1881	Kelleys Island	do	Miss N. V. Hayes	0	1
1882	Kent	do	A. B. Stutzman, superintendent.	1	2
1883	Kimbolton	High School (department)	W. T. Berry	1	2
1884	Kingston	High School	A. L. Ellis	1	0
1885	Kingsville	do	C. A. Corbin	1	1
1886	Kinsman	do	Jas. J. H. Hamilton	1	1
1887	Lancaster	do	I. N. Keyser	1	1

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
67	101	1	1	8	2	15	25	8	18	No..	Yes.	500	$20,300	$210	$650	1829
49	82	0	0	.....	.....	.....	.....	3	17	No..	No..	250	300	1,900	.....	1830
40	50	0	0	0	1	.....	.....	.....	.....	No..	No..	15	2,500	.....	320	1831
2	6	.....	.....	.....	.....	.....	.....	.....	4	No..	No..	100	5,050	600	10	1832
22	28	0	0	.....	.....	.....	.....	2	1	No..	No..	116	4,000	3,413	46	1833
18	19	0	0	0	0	0	0	2	2	No..	No..	200	22,700	.....	96	1834
16	32	0	0	.....	.....	.....	.....	2	8	Yes.	No..	300	.....	.....	.....	1835
10	12	.....	.....	3	0	2	2	2	3	No..	No..	0	6,000	400	100	1836
14	16	0	0	7	0	1	0	2	2	Yes.	No..	100	8,000	3,000	254	1837
18	38	.....	.....	3	5	5	7	3	5	Yes.	.....	.....	3,100	.....	.....	1838
35	63	0	1	.....	.....	.....	.....	3	8	No..	Yes.	10,000	1,700	.....	.....	1839
12	35	.....	.....	.....	.....	2	2	2	3	No..	No..	1,400	12,500	1,200	10	1840
9	18	0	0	0	0	0	0	0	2	No..	No..	15	80	.....	45	1841
32	32	2	1	.....	.....	.....	.....	4	5	.....	No..	1,285	8,.00	3,836	121	1842
72	96	0	1	.....	.....	.....	.....	6	4	No..	No..	0	30,200	.....	.....	1843
14	15	0	0	.....	.....	.....	.....	0	0	Yes.	No..	210	10,000	.....	.....	1844
23	29	0	0	.....	.....	.....	.....	5	8	No..	No..	0	4,000	.....	50	1845
23	16	0	0	0	0	0	0	0	0	No..	No..	0	10,100	.....	120	1846
6	21	0	0	0	0	0	0	0	6	No..	No..	300	16,200	1,348	77	1847
6	4	0	0	0	0	0	0	1	1	No..	Yes.	100	10,400	.....	30	1848
25	17	0	0	1	4	0	6	1	3	No..	No..	250	35,020	.....	.....	1849
17	16	1	3	0	0	17	16	0	0	No..	No..	0	5,000	10	0	1850
29	28	1	1	0	0	.....	.....	0	0	No..	No..	100	7,000	327	50	1851
20	22	.....	.....	.....	.....	.....	.....	0	0	No..	No..	0	15,050	.....	.....	1852
25	35	2	1	.....	.....	.....	.....	6	2	No.	No..	500	25,300	2,000	250	1853
20	45	.....	.....	0	0	2	2	3	12	Yes.	No..	600	35,100	.....	150	1854
33	48	1	0	0	0	0	0	5	1	No..	No..	500	55,550	.....	150	1855
25	25	0	0	1	0	2	0	3	0	No..	No..	38	5,200	.....	75	1856
12	33	1	1	.....	.....	6	4	5	0	No..	No..	100	15,000	.....	90	1857
13	22	0	0	.....	.....	.....	.....	1	2	No..	No..	0	3,000	.....	35	1858
59	120	1	2	0	0	10	12	9	21	Yes.	No..	300	75,100	.....	400	1859
18	16	5	4	.....	.....	.....	.....	5	0	No..	No..	0	5,000	.....	50	1860
10	25	0	0	.....	.....	.....	.....	8	2	No..	No..	383	10,020	.....	150	1861
39	25	0	0	0	0	.....	.....	.....	.....	No..	No..	0	1,025	.....	50	1862
22	18	0	0	.....	.....	.....	.....	.....	.....	No..	No..	.....	45,100	.....	300	1863
12	24	.....	.....	.....	.....	.....	.....	.....	.....	No..	No..	250	1,025	.....	.....	1864
27	23	0	0	5	3	12	15	1	2	No..	No..	327	6,050	180	124	1865
29	35	0	0	.....	.....	.....	.....	2	3	No..	No..	200	12,150	1,066	105	1866
16	16	.....	.....	.....	.....	.....	.....	3	1	No..	No..	14	5,100	2,700	27	1867
22	24	7	8	4	8	2	10	.....	1	No..	No..	0	6,000	.....	195	1868
31	32	.....	.....	.....	.....	.....	.....	2	4	No..	No..	.....	23,060	11,637	613	1869
18	23	0	0	1	0	.....	.....	1	1	No..	No..	158	4,050	1,200	26	1870
8	18	0	0	.....	.....	0	0	1	5	No..	No..	50	275	.....	90	1871
10	13	.....	.....	.....	.....	0	0	1	2	No..	No..	0	20,050	.....	51	1872
62	78	4	4	.....	.....	.....	.....	1	10	Yes.	No..	100	80,100	.....	.....	1873
22	51	3	2	.....	.....	.....	.....	1	13	No..	No..	.....	200	.....	.....	1874
7	6	0	0	.....	.....	.....	.....	1	1	No..	No..	0	1,200	239	14	1875
15	25	.....	.....	.....	.....	.....	.....	1	4	No..	No..	0	15,000	5,590	27	1876
19	20	1	0	.....	.....	.....	.....	3	3	No..	No..	3	3,625	480	200	1877
.....	.....	0	0	.....	.....	3	4	1	0	No..	No..	0	12,000	.....	180	1878
12	23	0	0	0	0	.....	.....	.....	.....	No..	No..	0	3,500	.....	.....	1879
18	15	0	0	.....	.....	6	9	0	4	No..	No..	100	.....	.....	.....	1880
12	16	0	0	0	0	0	0	1	7	No..	No..	0	1,500	1,000	.....	1881
37	69	0	0	.....	.....	.....	.....	4	14	Yes.	No..	800	64,200	.....	225	1882
10	16	0	0	0	0	0	0	0	6	No..	No..	0	2,540	850	.....	1883
10	20	0	1	0	0	0	0	1	6	No..	No..	0	8,030	1,800	240	1884
34	55	0	0	.....	.....	.....	.....	0	7	No..	No..	0	15,300	.....	150	1885
8	9	0	0	0	0	.....	.....	.....	.....	No..	No..	20	8,020	2,597	132	1886
33	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1887

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	OHIO—continued.				
1888	Lebanon	High School	J. F. Lukens	1	0
1889	Leesburg	do	J. L. Strange	3	a2
1890	Leetonia	do	G. W. Henry	1	1
1891	Leipsic	do	J. S. Otis	1	0
1892	Le Roy	do	F. D. Ward	1	0
1893	Lexington	do	J. G. D. Tucker	1	2
1894	Lima	do	S. Steffens	1	3
1895	Lindsey	do	Geo. A. Stine	2	1
1896	Linwood	High School (department)	E. W. Wilkinson	1	a5
1897	Lithopolis	High School	A. Ernsberger	1	2
1898	Lodi	do	B. F. Hoover	2	0
1899	Logan	do	E. F. Alspach	2	0
1900	London	do	J. W. MacKinnon	1	2
1901	Lorain	do	E. N. McConnell	1	3
1902	Loudonville	High School (department)	S. P. Baughman	2	0
1903	Louisville	High School	Frank Jones	1	3
1904	Loveland	do	D. N. Cross	1	0
1905	Lynchburg	High School (department)	Henry G. Williams	1	0
1906	Lyons	High School	G. W. Hayward, reporting officer.	1	1
1907	McArthur	do	Joseph Rea, superintendent.	1	a5
1908	McComb	High School (department)	J. Sherman Beck	1	0
1909	McConnelsville	do	W. M. Wikoff	2	0
1910	Macksburg	do	Frank P. Wheeler	2	2
1911	Madisonville	High School	F. B. Dyer	1	1
1912	Malvern	High School (department)	J. E. Finefrock	1	3
1913	Manchester	do	J. M. Jones	2	0
1914	Mansfield	High School	Miss Emma Paddack	0	5
1915	Marengo	do	E. W. Green	1	0
1916	Marietta	do	Miss S. P. Pearce	1	3
1917	Marion	do	Arthur Powell	1	2
1918	Marlboro	High School (department)	W. S. Jones	1	2
1919	Martinsville	High School	R. B. Faisley	1	2
1920	Marysville	do	Louis B. Demorest	2	1
1921	Mechanicsburg	do	Miss Ida Bunker	0	3
1922	Middleport	do	W. P. Stewart	1	0
1923	Middleton	do	Miss Ida M. Fiske	0	2
1924	Milan	Union School	W. G. Scroggie	1	1
1925	Milford Center	High School	W. H. Sidebottom	1	3
1926	Millersburg	High School (department)	John A. McDowell	4	a6
1927	Monroe	High School	Fletcher Hawk	1	0
1928	Mount Blanchard	High School (department)	D. A. Sharp	1	2
1929	Mount Gilead	High School	M. W. Speare	1	1
1930	Mount Pleasant	do	Wm. M. White	1	1
1931	Mount Sterling	High School (department)	L. M. Sheppard	1	0
1932	Napoleon	High School	W. W. Weaver, superintendent.	2	1
1933	Nelsonville	do		1	1
1934	Nevada	High School (department)	Geo. Rossiter	1	1
1935	Newark	High School	S. E. Swartz	1	5
1936	New Athens	High School (department)	J. R. Hosick	1	1
1937	New Bremen	High School	K. Vander Maaten	1	0
1938	New Carlisle	do	G. A. Billow	2	0
1939	New Holland	High School (department)	Geo. A. Chambers	1	2
1940	New Lexington	High School	J. C. Fowler	1	0
1941	New Lisbon	do	W. H. Van Fossan	1	1
1942	New Paris	High School (department)	F. S. Alley	2	a5
1943	New Richmond	High School	Mrs. W. A. Davis	1	1
1944	New Straitsville	do	C. L. Williams	1	0
1945	New Vienna	do	F. H. Roberts	2	0
1946	New Washington	do	J. F. Kimerline	2	0
1947	Niles	do	Miss Lida Baldwin	1	2

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
6	16	0	0	0	0	0	0	1	5	No..	No..	100	$10,200	$8,433	$124	1888
10	8	3	5	.....	.....	.....	.....	3	4	No..	No..	.....	5,050	.....	.....	1889
16	17	0	0	.....	.....	.....	.....	0	1	No..	No..	250	50,300	5,760	85	1890
17	14	0	0	2	0	.....	.....	0	0	No..	No .	100	15,000	3,431	29	1891
13	13	.....	.....	.....	.....	.....	.....	0	2	Yes.	No..	655	10,351	130	15	1892
22	27	0	0	0	0	.....	.....	1	6	No..	No..	25	4,060	.....	60	1893
36	69	2	1	4	6	0	0	4	9	No..	No..	300	15,600	3,000	.....	1894
20	18	0	1	0	0	0	0	0	0	No..	No..	0	5,300	.....	19	1895
9	4	2	4	0	0	0	0	3	2	Yes.	No..	412	15,050	.....	168	1896
20	10	0	0	0	0	0	0	0	0	No..	No..	0	2,059	.....	25	1897
15	25	0	0	2	0	.....	.....	1	1	Yes.	No..	400	20,100	.....	300	1898
19	46	0	0	2	2	2	0	6	7	No..	No..	220	15,250	.....	.....	1899
25	46	2	2	.....	.....	.....	.....	6	11	Yes.	No..	0	52,000	4,000	150	1900
32	30	0	1	.....	.....	.....	.....	2	6	No..	No..	150	14,020	.....	9	1901
8	9	0	0	1	0	2	3	0	0	No..	No..	0	28,050	.....	.....	1902
6	21	0	0	0	0	0	0	0	0	Yes.	No..	0	12,050	700	30	1903
20	25	.....	.....	.....	.....	.....	.....	1	2	No..	No..	100	25,000	.....	.....	1904
9	15	0	0	0	0	3	0	1	0	No..	No..	.....	10,100	3,900	40	1905
15	15	0	0	.....	.....	.....	.....	.....	.....	No..	No..	.....	4,035	171	.....	1906
18	11	2	2	1	0	.....	.....	3	2	Yes.	No..	20	3,500	.....	40	1907
5	14	0	0	.....	.....	.....	.....	0	3	No..	No..	43	18,250	531	40	1908
40	27	.....	.....	0	1	.....	.....	2	5	Yes.	No..	.....	30,300	.....	100	1909
12	23	0	0	.....	.....	.....	.....	2	2	No..	No..	75	2,000	385	.....	1910
24	38	0	0	2	3	.....	.....	1	14	No..	No..	400	5,300	1,200	600	1911
22	27	0	0	1	1	.....	.....	3	1	No..	No..	120	2,000	.....	40	1912
16	24	3	3	.....	.....	.....	.....	2	1	No..	No..	100	8,010	4,500	50	1913
49	95	0	0	4	6	2	0	5	22	No..	No..	200	35,010	.....	96	1914
10	17	0	0	0	0	4	10	4	5	No..	No..	30	6,000	1,200	100	1915
5	105	0	2	.....	.....	.....	.....	.....	16	No..	No..	500	5,400	.....	.....	1916
26	61	0	0	0	0	.....	.....	2	9	No..	No..	75	97,200	27,035	352	1917
25	35	0	0	0	0	0	0	0	0	No..	No..	200	10,050	.....	175	1918
10	12	3	2	.....	.....	.....	.....	0	0	No..	No..	98	4,560	.....	30	1919
35	62	1	3	.....	.....	.....	.....	10	20	No..	No..	300	8,200	1,800	187	1920
48	21	.....	.....	2	3	3	0	7	4	Yes.	No..	100	8,125	.....	420	1921
17	26	1	3	0	0	2	0	3	3	No..	No..	.....	.....	520	24	1922
25	45	0	0	.....	.....	.....	.....	2	9	No..	No..	546	600	.....	33	1923
18	19	1	2	2	4	.....	.....	3	6	No..	No..	60	18,000	.....	200	1924
24	16	8	6	.....	.....	1	7	0	1	No..	No..	400	10,100	.....	.....	1925
33	34	0	0	.....	.....	.....	.....	1	3	No..	No..	.....	25,100	5,594	371	1926
10	9	0	0	1	0	.....	.....	1	6	No..	No..	150	.....	.....	30	1927
10	15	0	0	1	0	.....	.....	2	5	No..	No..	150	5,075	.....	80	1928
24	26	1	4	.....	.....	.....	.....	6	3	No..	No..	300	35,250	.....	200	1929
20	24	1	1	.....	.....	.....	.....	0	2	No..	No..	60	10,000	2,500	120	1930
9	23	1	1	2	11	7	12	0	4	No..	No..	11	25,200	3,650	75	1931
17	35	0	0	6	8	3	5	1	5	No..	Yes.	0	55,200	9,100	104	1932
24	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1933
13	18	0	0	0	0	2	0	2	3	No..	No..	0	15,100	2,500	95	1934
56	124	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1935
18	21	0	1	1	1	5	4	4	7	No..	No..	100	.....	.....	.....	1936
15	9	0	0	0	2	0	2	2	No..	No..	450	30,300	1,862	92	1937
17	25	0	0	.....	.....	.....	.....	1	3	No..	No..	125	20,125	1,200	50	1938
13	14	0	0	2	0	2	0	4	1	No..	No..	0	1,500	.....	18	1939
18	24	0	0	2	0	1	0	0	4	No..	No..	500	25,050	4,000	224	1940
20	40	.....	.....	.....	.....	.....	.....	2	9	No..	No..	400	20,300	.....	150	1941
24	22	.....	.....	.....	.....	.....	.....	3	3	No..	No..	400	12,100	.....	110	1942
5	20	1	6	0	2	2	2	0	0	Yes.	No..	300	12,050	600	.....	1943
20	21	0	0	5	9	.....	.....	0	6	No..	No..	0	15,300	.....	.....	1944
19	28	1	1	2	3	.....	.....	3	7	No..	No..	50	12,100	3,500	350	1945
15	19	0	0	2	4	8	12	3	5	No..	No..	120	18,240	2,100	180	1946
25	43	0	0	0	4	.....	.....	2	4	No..	No..	400	47,140	.....	78	1947

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	OHIO—continued.				
1948	North Amherst	High School	Miss M. G. Lamberton	1	1
1949	North Baltimore	High School (department)	W. M. Waltermire	1	0
1950	North Lewisburg	High School	W. D. Pepple	2	0
1951	Norwalk	do		(5)	
1952	Norwich	Union School	Chas. Fulkerson	1	1
1953	Oak Harbor	High School	Geo. H. Wittney	1	1
1954	Oberlin	do	Miss Grace Safford	1	2
1955	Olmstead	do	Chas. W. Harding	1	2
1956	Orrville	do	J. L. Wright	1	0
1957	Osborn	High School (department)	S. S. Gabriel	1	3
1958	Ostrander	do	J. W. Cross	1	1
1959	Oxford	High School	W. H. Steuart	1	2
1960	Painesville	do	A. C. Burrill	3	1
1961	Paine	High School (department)	F. Livingood	1	0
1962	Peebles	do	C. L. Swain	1	1
1963	Pemberville	do	Jno. S. Hoyman	a2	3
1964	Perry	High School	Jasper Robertson	1	0
1965	Perrysburg	do	I. M. Saddler	1	1
1966	Perrysville	High School (department)	D. P. Fulmer	2	1
1967	Pickerington	do	E. E. Arnold, B. PH.	1	1
1968	Piketon	High School	M. F. Andrew	1	0
1969	Piqua	do	C. W. Bennett	1	1
1970	Plain City	High School (department)	Chas. W. Vandegrift	1	0
1971	Pleasant Hill	do	C. H. Teach	1	0
1972	Pomeroy	High School	T. C. Flanegin	1	1
1973	Port Clinton	do	J. E. McKean	1	1
1974	Portsmouth	do	W. A. Connell	3	1
1975	Port Washington	Union School	Chas. L. Cronebach	1	0
1976	Put-in-Bay	High School	—— Bookmyer	1	1
1977	Quaker City	do	Alva B. Hall	2	0
1978	Ravenna	do	F. A. Merrill	3	2
1979	Reesville	High School (department)	F. M. Kelly	1	2
1980	Rendville	High School	Chas. W. Cookson	1	0
1981	Reynoldsburg	High School (department)	D. J. Snyder	3	2
1982	Richwood	High School	J. W. Simon	1	1
1983	Ripley	Union School	Isaac Mitchell	2	0
1984	Rock Creek	High School	A. A. Prentice	2	2
1985	Roseville	do	John A. Williams	2	3
1986	Ross	Venice Union School	A. E. B. Stephens	1	2
1987	Rushsylvania	High School (department)	E. R. Abbott	1	2
1988	St. Clairsville	High School	Walter Mitchell	1	0
1989	St. Marys	High School (department)	J. D. Simkins, superintendent.	1	3
1990	St. Paris	do	L. I. Morse	1	1
1991	Salem	High School	Frank R. Dyer	1	1
1992	Salineville	High School (department)	R. S. Baker	a2	11
1993	Sandusky	High School	L. A. Hine	2	2
1994	Scott	do	Perry Fostnaught	1	0
1995	Seven Mile	High School (department)	W. A. Trowbridge	1	0
1996	Seville	High School	A. W. Foster	1	1
1997	Shaucks	do	S. A. Hoskins	1	0
1998	Sidney	do	Ida Haslup	2	2
1999	South Charleston	do	E. M. Vancleve	1	1
2000	Sparta	High School (department)	B. T. Jenkins	2	1
2001	Spencer	do	J. W. Klinker	1	1
2002	Steubenville	High School	E. W. Matthews	2	3
2003	Stockport	do	F. M. Gill	1	0
2004	Stryker	High School (department)	A. B. Stevens	a2	a3
2005	Summerfield	High School	J. R. Franklin	1	0
2006	Sunbury	do	L. R. Yeager, A. B.	1	0
2007	Tallmadge	Central School	Miss A. M. Nutting	0	1
2008	Tiffin	High School	C. A. Kroutt, A. M.	1	3
2009	Toledo	do	H. C. Adams	4	3

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
20	28	0	0	.....	.....	.....	.....	0	4	Yes.	Yes.	94	$1,600	.....	$50	1948
15	39	0	1	.....	.....	.....	.....	3	1	No..	No..	32	10,000	.....	80	1949
14	13	7	5	0	0	0	0	2	3	No..	No..	100	7,600	.....	.....	1950
73	116	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1951
20	22	0	0	0	0	.....	.....	.....	.....	No..	No..	0	1,560	.....	.....	1952
16	22	0	0	4	2	.....	.....	4	7	No..	No..	150	20,200	$4,320	75	1953
75	86	2	8	.....	.....	.....	.....	2	11	No..	No..	400	52,100	15,340	306	1954
26	22	0	0	26	22	.....	.....	0	3	No..	No..	0	11,000	935	40	1955
13	23	0	0	0	0	.....	.....	2	7	No..	No..	100	15,100	.....	.....	1956
30	20	3	2	3	2	1	1	4	0	No..	No..	400	10,050	.....	75	1957
12	15	0	0	5	2	.....	.....	1	2	No..	No..	0	8,070	.....	113	1958
30	40	1	2	4	6	6	8	4	10	No..	No..	300	3,600	10,500	375	1959
45	65	1	1	3	2	1	0	4	14	No..	No..	500	10,500	3,300	750	1960
5	7	0	0	2	7	0	0	0	0	No..	No..	0	6,175	2,127	30	1961
11	20	.....	.....	1	0	.....	.....	.....	.....	No..	No..	.....	1,500	960	20	1962
20	25	0	0	0	0	.....	.....	1	0	No..	No..	125	15,000	500	50	1963
21	25	0	0	4	4	2	2	3	3	No..	No..	15	6,050	.....	.....	1964
12	44	0	0	0	4	3	3	5	3	No..	No..	0	13,400	.....	.....	1966
2	6	0	0	0	0	0	0	0	2	No..	No..	150	8,150	.....	60	1966
20	19	0	0	0	0	0	0	0	0	No..	No..	0	2,500	800	24	1967
15	15	2	0	0	0	.....	.....	0	0	No..	No..	0	2,000	.....	.....	1968
39	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1969
16	15	2	2	0	0	0	0	0	4	No..	No..	50	3,050	.....	24	1970
21	25	0	0	0	0	.....	.....	4	3	No..	No..	150	8,000	2,421	39	1971
29	33	.....	.....	.....	.....	.....	.....	7	2	No..	No..	.....	70,300	.....	.....	1972
20	36	0	0	6	10	.....	.....	3	1	No..	No..	200	30,000	.....	40	1973
51	100	1	3	.....	.....	.....	.....	5	10	No..	No..	.....	.....	.....	250	1974
13	11	0	0	0	0	.....	.....	0	0	No..	No..	10	4,000	.....	15	1975
15	25	0	0	.....	.....	.....	.....	0	0	No..	No..	30	2,625	.....	.....	1976
16	24	0	0	0	0	0	0	4	4	Yes.	No..	.....	10,200	.....	100	1977
26	44	1	0	.....	.....	.....	.....	2	9	No..	No..	800	18,200	.....	90	1978
5	13	3	1	.....	.....	5	13	0	0	No..	No..	0	1,000	.....	1,500	1979
7	8	12	9	.....	.....	.....	.....	0	2	No.	No..	25	8,000	.....	.....	1980
45	40	.....	.....	.....	.....	.....	.....	7	3	No..	No..	.....	10,500	.....	678	1981
10	35	1	2	0	2	1	0	1	8	No..	No..	250	25,050	3,800	150	1982
17	45	.....	.....	.....	.....	.....	.....	.....	8	No..	No..	500	6,000	6,317	114	1983
20	38	0	0	.....	.....	.....	.....	3	4	No..	No..	100	10,060	.....	150	1984
16	15	.....	.....	.....	.....	12	10	0	0	No..	No..	.....	10,025	600	200	1985
30	20	.....	.....	.....	.....	5	5	0	0	No..	No..	100	2,550	.....	.....	1986
16	17	9	8	.....	.....	.....	.....	0	0	No..	No.	0	7,000	.....	.....	1987
18	37	0	0	.....	.....	.....	.....	6	14	No..	No..	400	20,200	.....	200	1988
19	48	0	3	0	0	.....	.....	1	6	Yes.	No..	700	38,226	5,303	80	1989
16	16	1	2	2	2	1	0	1	2	No..	No..	50	15,075	3,500	120	1990
55	56	0	1	2	4	.....	.....	6	4	No..	No..	200	40,150	.....	144	1991
16	28	1	1	2	0	.....	.....	2	2	No..	No..	0	14,000	4,500	.....	1992
62	110	1	1	.....	.....	.....	.....	4	25	Yes.	No..	560	51,000	4,000	100	1993
10	14	.....	.....	.....	.....	.....	.....	0	0	No.	No.	.....	7,575	.....	28	1994
17	19	1	2	2	1	.....	.....	0	0	No..	No..	0	.....	5,000	45	1995
6	7	0	0	0	0	.....	.....	0	0	Yes.	No..	275	4,150	.....	.....	1996
19	20	0	0	2	3	.....	.....	3	3	No..	No..	0	10,000	2,058	29	1997
47	60	3	0	.....	.....	.....	.....	4	7	No	No..	.....	38,000	.....	.....	1998
19	16	13	21	4	3	.....	.....	7	2	No..	No..	400	25,500	6,000	124	1999
16	14	0	0	0	0	.....	.....	0	0	No..	No..	448	3,050	.....	50	2000
27	20	0	0	.....	.....	.....	.....	0	0	No..	No..	40	5,100	1,242	32	2001
48	85	1	3	5	0	5	0	4	8	No..	No..	2,523	60,650	4,381	187	2002
17	33	0	0	4	0	.....	.....	4	0	No..	No..	50	6,100	1,036	3	2003
19	21	.....	.....	.....	.....	5	4	.....	.....	Yes.	No..	120	20,250	.....	100	2004
15	16	0	0	.....	.....	.....	.....	.....	.....	No.	No..	100	.....	.....	.....	2005
13	12	2	0	0	0	.....	.....	1	1	Yes.	No..	30	5,025	.....	25	2006
13	18	0	0	.....	.....	.....	.....	1	7	No..	No..	600	.....	.....	.....	2007
47	94	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2008
138	276	.....	1	.....	.....	.....	.....	21	61	No..	No..	800	101,500	.....	350	2009

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	OHIO—continued.				
2010	Troy	High School	E. A. Lymann	2	1
2011	Unionville Center	High School (department)	E. H. Hatton	1	0
2012	Upper Sandusky	High School	W. A. Baker	1	1
2013	Urbana	do	Wm. McK. Vance	1	1
2014	Vanlue	High School (department)	O. J. Cory	1	0
2015	Van Wert	High School	Emily Shinn	1	2
2016	Versailles	do	W. F. Allgire	2	0
2017	Wadsworth	High School (department)	F. M. Plank	2	1
2018	Washington Court-House.	High School	Thos. R. Berry	1	1
2019	Waterville	do	Thos. B. Pinkerton	1	2
2020	Wellington	do	R. H. Kinnison	1	3
2021	West Alexandria	do	C. O. Howell	1	0
2022	Westerville	do	T. M. Fouts	1	1
2023	West Jefferson	High School (department)	J. V. Stewart	a2	a3
2024	West Liberty	High School	J. M. Reason, superintendent.	a2	a4
2025	West Salem	do	D. F. Mock	1	4
2026	West Union	do	F. C. Hood, reporting officer.	2	0
2027	Westwood	do	S. T. Logan	1	1
2028	Williamsburg	do	G. W. Felter	1	0
2029	Willoughby	do	J. C. Barney, superintendent.	1	3
2030	Wilmington	do	E. B. Stiles	3	0
2031	Winchester	High School (department)	John Rea	1	0
2032	Winesberg	do	R. H. Sunkle	1	1
2033	Woodsfield	High School	E. B. Thomas	1	0
2034	Woodstock	High School (department)	George Waite	1	a4
2035	Wooster	High School	Miss Jane A. Boyd	0	5
2036	Worthington	do	W. F. Kelly	1	a3
2037	Xenia	do	G. J. Graham	3	2
2038	Youngstown	Rayen High School	B. M. Hill	3	3
2039	Zaleski	High School	C. J. Biery	1	0
2040	Zanesville	do	W. M. Townsend	2	7
	OREGON.				
2041	Ashland	High School	P. A. Getz	1	1
2042	Grants Pass	do	Henry L. Benson	1	7
2043	Portland	do	F. G. Young	3	6
2044	Pineville	High School (department)	M. R. Elliott	2	a1
2045	Union	do	Bernard H. Moore	1	0
	PENNSYLVANIA.				
2046	Allegheny	High School	W. H. Dodds	4	5
2047	Allentown	do	F. D. Raub	1	3
2048	Altoona	do	J. G. Shucker	(a)	
2049	Archbald	do	R. W. Davis	1	1
2050	Ashbourne	Cheltenham High School	Geo. W. Flounders	1	a4
2051	Ashland	High School	S. H. Clair	2	1
2052	Bangor	do	A. J. Devereaux	2	0
2053	Beaver	do	H. B. Twitmyer	1	1
2054	Bedford	do	Irving A. Heikes	1	0
2055	Bellefonte	do	G. W. Johnstonbaugh	3	0
2056	Berrysburg	do	C. Edgar Rebec	1	1
2057	Berwick	do	E. K. Richardson	2	0
2058	Bethlehem	do	Chas. T. Bender	2	0
2059	Birdsboro	do	H. G. Hunter	1	0
2060	Bismarck	do	J. B. Batdorf	1	0
2061	Bradford	High School (department)	E. M. Boyce, superintendent.	0	3

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
28	42	1	0	3	2	1	0	2	1	Yes.	Yes.	2,000	$71,500	.....	.....	2010
9	14	0	0	2	2	.....	.....	0	0	No..	No..	0	10,000	$600	.....	2011
17	23	.....	.....	.....	.....	.....	.....	2	8	No..	No..	.....	60,300	.....	.....	2012
33	51	2	3	4	3	3	3	3	4	Yes.	No..	200	85,500	.....	$115	2013
4	1	0	0	0	0	3	0	0	0	No..	No..	0	1,012	1,345	4	2014
45	103	.....	1	.....	.....	.....	.....	4	17	No..	No..	0	2,000	.....	113	2015
26	28	0	0	1	0	0	0	3	5	No..	No..	0	15,005	1,200	7	2016
22	32	26	22	.....	.....	.....	.....	3	6	No..	No..	176	25,100	.....	96	2017
30	62	.....	.....	.....	.....	.....	.....	4	11	No..	No..	50	18,300	.....	100	2018
11	22	2	1	0	0	0	0	1	1	No..	No..	125	12,040	1,564	46	2019
60	70	1	2	.....	.....	.....	.....	8	9	No..	No..	50	35,150	1,000	550	2010
13	6	.....	.....	.....	.....	.....	.....	2	1	No..	No..	50	15,075	370	71	2021
20	30	1	1	.....	.....	.....	.....	3	7	No..	No..	100	10,200	.....	.....	2022
18	21	.....	6	2	0	.....	.....	2	0	No..	No..	0	.....	.....	.....	2023
7	8	5	2	.....	.....	.....	.....	1	5	No..	No..	150	3,200	.....	50	2024
40	28	0	0	0	0	1	1	1	1	No..	No..	150	25,100	.....	176	2025
22	33	0	0	0	0	.....	.....	2	3	Yes.	No..	200	12,100	.....	60	2026
9	8	.....	.....	.....	1	4	0	1	3	No..	No..	20	15,025	1,500	100	2027
6	8	0	0	4	0	.....	.....	3	6	No..	No..	30	10,050	.....	180	2028
16	34	0	0	2	1	6	19	1	5	No..	No..	490	15,100	5,109	337	2029
26	41	4	1	2	1	.....	.....	9	5	No..	No..	150	10,100	.....	.....	2030
15	18	8	7	0	0	15	18	0	0	No..	No..	14	4,000	.....	.....	2031
18	4	0	0	0	0	3	0	4	2	No..	No..	50	3,050	.....	.....	2032
13	13	0	0	2	0	.....	.....	1	0	Yes.	No..	0	10,000	.....	.....	2033
25	19	7	2	0	0	.....	.....	4	0	No..	No..	10	8,150	330	50	2034
55	119	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2035
4	12	2	6	.....	.....	.....	.....	2	4	No..	No..	200	13,000	420	230	2036
58	84	17	26	15	8	.....	8	12	14	No..	No..	300	20,300	.....	101	2037
56	100	2	1	11	5	.....	.....	10	11	No..	No..	40	102,000	.....	133	2038
18	9	0	0	1	1	4	2	0	4	Yes	No..	0	1,380	.....	.....	2039
94	144	4	2	15	5	.....	.....	6	10	No..	No..	300	30,500	.....	100	2040
15	44	.....	1	0	0	0	0	0	0	Yes.	No..	50	3,050	3,000	150	2041
112	131	0	0	.....	.....	.....	.....	2	4	Yes.	No..	250	8,200	4,000	250	2042
90	173	.....	2	.....	.....	.....	.....	6	26	Yes.	No..	500	200,025	145,600	1,074	2043
10	15	0	0	5	10	.....	.....	0	0	No..	No..	0	6,100	.....	.....	2044
9	7	3	0	3	2	4	3	2	7	Yes.	No..	0	15,375	1,023	65	2045
101	111	1	2	8	6	5	0	13	16	No..	No..	0	130,300	1,696	400	2046
75	101	0	0	15	9	10	0	16	19	No..	No..	500	100	.....	.....	2047
42	101	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	.....	.....	2048
3	18	0	0	0	0	0	0	0	0	No..	No..	300	10,100	1,000	.....	2049
11	11	2	2	0	0	2	0	2	2	Yes.	No..	1,000	20,050	.....	.....	2050
29	34	0	0	0	0	0	0	2	7	Yes.	No..	1,100	40,550	2,257	59	2051
20	26	.....	.....	3	1	2	2	1	1	Yes.	No..	300	10,200	840	25	2052
23	32	0	0	6	7	9	4	3	11	Yes.	No..	600	13,150	414	241	2053
30	36	1	2	1	0	0	0	0	0	Yes.	No..	45	25,000	975	35	2054
43	49	2	2	2	6	3	9	5	11	Yes.	No..	100	25,200	1,210	200	2055
22	21	0	0	0	0	.....	.....	0	0	No..	No..	.....	300	176	.....	2056
24	33	0	0	2	0	22	33	3	1	Yes.	No..	.....	50,100	881	300	2057
8	18	0	0	0	0	0	0	0	2	Yes.	No..	60	35,000	800	.....	2058
12	39	.....	.....	.....	.....	.....	.....	2	4	No..	No..	0	.....	600	.....	2059
13	10	0	0	0	0	0	0	0	0	No..	No..	0	15,000	63	72	2060
22	51	7	9	.....	.....	.....	.....	.....	.....	Yes.	No..	.....	60,000	2,206	1,019	2061

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	PENNSYLVANIA—continued.				
2062	Bristol	High School (department)	M. S. Booz, superintendent.	(a)	
2063	Brownsville	do	J. G. Anderson	1	5
2064	Bryn Mawr	High School	J. I. Robb	1	1
2065	Butler	do	L. L. Fleeger	1	1
2066	Cambridgeboro	Union School	Chas. F. Chamberlain	1	2
2067	Carbondale	High School	H. J. Hockenbury	1	6
2068	Carlisle	do	Miss Mary Landes	1	1
2069	do	High School (colored)	D. M. C. Gring	1	0
2070	Carmichaels	Greene Academy	W. M. Nickeson	1	1
2071	Catawissa	High School (department)	John F. L. Morris	2	0
2072	Centralia	High School	W. W. Heffner	1	1
2073	Chambersburg	do	Sam'l Gelvix	1	3
2074	Chester	Central High School	J. Frank Reigart	2	2
2075	Columbia	High School	Miss Mary Welsh	0	2
2076	Connellsville	do		(2)	
2077	Conshohocken	do	J. K. Harley	1	1
2078	Coopersburg	do	Alvin Rupp	1	1
2079	Corry	do	Miss Dora Wells	1	2
2080	Coudersport	do	W. F. Du Bois	1	5
2081	Danville	do	S. M. Gibbs	1	2
2082	Dauphin	do	G. W. McIlhenny, reporting officer.	2	1
2083	Doylestown	High School (department)	John L. Shroy, B. S	1	2
2084	Dunmore	High School	L. R. Fowler	1	1
2085	Easton	High School (South)	W. J. La Barre	3	0
2086	East Stroudsburg	High School	J. J. Unger	1	0
2087	Elizabethville	do	D. H. Romberger	3	0
2088	Emlenton	Graded School	W. W. Fell	1	1
2089	Emporium	High School (department)	H. H. Weber	1	2
2090	Erie	High School	H. C. Missiner	5	4
2091	Everett	do	E. E. McCurdy	1	1
2092	Girard	do	A. H. Wiard	1	0
2093	Great Bend	do	E. D. Bovard	1	4
2094	Greenville	do	Jas. P. Whitla	1	1
2095	Hamburg	do	H. Oram Hine	1	0
2096	Hanover	do	Daniel Ruff	2	0
2097	Harrisburg	Girls' High School	Miss Jennie F. Givler	0	7
2098	do	Boys' High School	J. Howard Wert	3	1
2099	Hatboro	High School	Wm. S. Delp	1	0
2100	Hazleton	do	Peter J. Gough	2	1
2101	Hokendauqua	High School (department)	M. P. Reagle	1	0
2102	Honesdale	High School	Geo. W. Twitmyer	1	3
2103	Huntingdon	High School (department)	L. S. Shinnell	2	2
2104	Hyndman	do	J. A. Luman	1	4
2105	Indiana	do	J. B. Woodruff	1	1
2106	Kutztown	High School	D. B. Linderman	1	0
2107	Lancaster	Boys' High School	J. P. McCaskey	1	3
2108	do	Girls' High School	Miss S. H. Bundell	1	3
2109	Lansdale	High School (department)	J. Horace Landes	1	1
2110	Lansford	do	A. S. Beisel, M. E	3	29
2111	Lewisburg	High School	D. P. Stapleton	1	1
2112	Lewiston	High School (department)	Prof. Geo. H. Barnett	1	0
2113	Liverpool	High School	Edwin Brown	1	2
2114	Lock Haven	do	A. N. Raub	2	0
2115	Mahanoy City	do	J. H. Eisenhower	2	1
2116	Marietta	High School (department)	R. R. Pleam	1	8
2117	Meadville	High School	Miss E. R. Haxton	0	0
2118	Mechanicsburg	do	W. H. Hench	1	1
2119	Media	do	L. H. Watters	1	0
2120	Mercer	do	Geo. H. Lamb	2	1
2121	Mercersburg	do	W. T. Zumbro	1	

a Also give instruction in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
4	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2062
12	18	----	----	1	0	0	0	0	0	Yes.	No..	100	$12,100	$360	----	2063
21	23	0	1	0	0	2	2	2	0	Yes.	No..	650	25,050	----	$103	2064
19	31	0	0	8	0	6	0	----	----	No..	No..	400	175	1,200	----	2065
9	22	0	0	0	0	9	22	2	4	No..	No..	400	15,050	350	500	2066
65	153	0	0	1	0	----	----	2	15	Yes.	No..	601	35,300	----	200	2067
53	39	0	0	2	0	----	----	11	7	Yes.	No..	----	25,000	----	42	2068
10	19	----	----	0	0	----	----	0	0	No..	No..	0	5,000	2,400	----	2069
15	16	----	----	4	3	5	3	3	4	No..	No..	0	1,500	1,000	200	2070
29	21	3	1	----	----	3	0	4	5	Yes.	No..	475	10,040	875	----	2071
40	58	0	0	0	0	3	1	0	0	No..	No..	256	7,025	----	----	2072
40	76	3	2	----	----	----	----	7	6	No..	No..	400	50	----	90	2073
20	76	0	1	----	----	----	----	2	21	Yes.	----	70	25,150	4,500	45	2074
24	40	0	3	12	12	12	28	4	10	No..	No..	----	200	----	----	2075
10	12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2076
10	23	1	1	0	0	5	3	3	5	Yes.	No..	350	33,200	150	463	2077
20	20	0	0	2	3	0	0	4	3	Yes.	No..	140	2,500	150	30	2078
15	31	0	0	----	----	----	----	1	4	No..	No..	200	25,200	----	----	2079
32	64	0	0	5	10	2	0	1	6	No..	No..	50	15,250	422	226	2080
53	75	1	0	7	17	----	----	5	11	No..	No..	70	30,050	----	250	2081
13	17	----	1	----	----	----	----	0	0	Yes.	----	20	4,250	279	42	2082
28	37	7	4	0	0	0	0	1	2	Yes.	No..	20	33,050	1,163	----	2083
8	44	0	0	----	----	----	----	2	13	No..	No..	75	33,200	1,700	----	2084
27	48	0	0	2	0	5	0	5	14	No..	No..	224	16,000	----	109	2085
6	3	0	0	----	----	1	0	0	0	No..	No..	0	----	----	10	2086
59	42	0	0	11	0	----	----	----	----	No..	No..	547	8,000	463	600	2087
11	28	6	1	0	0	0	0	3	4	No..	No..	100	8,000	250	100	2088
12	31	2	2	2	2	2	0	1	7	Yes.	No..	150	2,125	546	30	2089
80	188	----	2	3	3	2	0	7	22	Yes.	No..	200	30,500	500	200	2090
7	27	0	0	0	0	3	2	2	5	Yes.	No..	150	8,025	450	----	2091
12	16	0	0	----	----	----	----	0	0	Yes.	No..	50	30	----	----	2092
10	15	0	0	----	----	----	----	0	6	No..	No..	300	5,000	485	----	2093
27	58	0	0	----	----	----	----	4	14	No..	No..	646	10,200	----	96	2094
24	16	0	0	----	----	----	----	2	4	No..	No..	100	30,000	----	100	2095
11	10	0	0	----	----	----	----	1	0	Yes.	No..	100	75	----	----	2096
0	250	----	5	----	----	----	----	15	0	Yes.	No..	671	----	----	----	2097
180	0	6	0	41	----	12	0	0	36	Yes.	No..	305	35,400	300	----	2098
12	20	0	0	0	0	----	2	0	2	Yes.	No..	----	8,000	----	200	2099
30	60	0	0	2	1	----	----	9	9	Yes.	No..	150	25,300	----	68	2100
10	5	0	0	0	0	----	----	0	0	Yes.	No..	300	10,100	175	100	2101
35	50	0	0	2	4	3	5	4	8	Yes.	Yes.	8,210	1,000	----	266	2102
40	70	----	----	35	25	----	----	4	16	Yes.	No..	1,200	----	2,200	----	2103
15	30	0	0	0	0	----	1	0	0	No..	No..	0	8,000	360	----	2104
10	15	3	0	0	0	----	----	0	0	Yes.	No..	0	----	713	----	2105
16	12	0	0	0	0	4	5	----	----	No..	No..	2	5,000	325	----	2106
126	0	----	----	----	----	----	----	0	0	----	----	----	----	----	----	2107
0	172	0	0	----	----	----	----	0	30	Yes.	No..	30	60,000	----	----	2108
12	15	0	0	----	----	----	----	2	12	Yes.	No..	305	25,000	635	----	2109
9	16	0	0	----	----	----	----	1	2	Yes.	No..	197	16,830	1,430	----	2110
37	38	----	1	----	----	----	----	5	13	Yes.	No..	----	5,000	150	133	2111
17	30	12	9	----	----	----	----	0	0	Yes.	No..	1,000	35,000	1,157	----	2112
10	12	0	0	0	0	----	----	8	9	No..	No..	201	8,000	278	----	2113
32	47	0	0	1	0	----	----	3	5	Yes.	No..	200	25,100	----	250	2114
22	23	0	0	0	0	2	3	2	4	Yes.	No..	400	17,100	----	50	2115
20	24	8	10	3	2	1	3	6	24	Yes.	No..	600	6,600	937	50	2116
41	85	----	2	18	44	----	----	0	0	No..	No..	1,200	41,000	----	500	2117
18	27	----	----	----	----	----	----	0	0	----	----	----	----	----	----	2118
14	24	0	2	----	----	----	----	0	0	No..	No..	300	28,100	100	200	2119
16	41	1	0	----	----	----	----	1	9	Yes.	No..	----	100,000	1,100	175	2120
27	25	1	1	0	0	----	----	2	8	No..	No..	50	9,500	300	56	2121

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TABLE 3.—*Statistics of Pub*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors	
				Male.	Female.
	1	2	3	4	5
	PENNSYLVANIA—continued.				
2122	Middletown	High School	D. H. Bucher	1	1
2123	Mifflinburg	do	James A. Rohbach, A. M.	1	1
2124	Milton	do	S. O. Goho	2	0
2125	Monongahela City	do	E. W. Dalbey	1	0
2126	Mount Carmel	do	W. N. Lehman	2	0
2127	Mount Joy	do	E. M. Allen	1	1
2128	Myerstown	do	Sam'l Haak, M. E.	1	0
2129	Nanticoke	do	S. L. Smith	1	2
2130	New Brighton	do	Miss Jennie Knott	1	1
2131	New Castle	do	Martin Gantz	2	3
2132	Newport	do	Silas Wright	1	6
2133	Newtown	High School (department)	J. Kirk Leatherman	1	1
2134	Norristown	High School	A. D. Eisenhower	3	7
2135	North East	do	F. H. Shaw, A. M.	1	1
2136	North Wales	do	Lewis R. Harley	1	1
2137	Oberlin	do	Calvin F. Martz	1	0
2138	Parkesburg	do	Chas. B. Cloud	1	0
2139	Pen Argyle	High School (department)	Wm. P. Messinger	3	63
2140	Philadelphia	Central High School	Henry C. Johnson, A. M., LL. B., PH. D.	22	0
2141	Phœnixville	High School	Harry F. Leister	1	2
2142	Pittsburg	Central High School	Chas. B. Wood	10	14
2143	Pittston	High School			
2144	do	West Pittston High School	William H. Putnam	1	2
2145	Pleasantville	High School	J. W. Lackey	1	
2146	Portland	do	H. F. Walker	1	2
2147	Pottstown	do	M. C. J. Stupp	2	1
2148	Pottsville	do	S. A. Thurlow	2	1
2149	Reading	High School (boys)	M. E. Scheibner	6	0
2150	do	High School (girls)	Miss E. A. Stahle	1	5
2151	Renovo	High School	Chas. B. Kelley	3	0
2152	Ridley Park	do	Miss Anne Mathias	0	2
2153	Royer's Ford	do	William Lockart	1	0
2154	Sandy Lake	Union School	M. E. Hess	3	82
2155	Scranton	High School	J. C. Lange	4	6
2156	Sellersville	do	H. T. Williams	2	2
2157	Shamokin	do	Geo. A. Farrow	3	0
2158	Sharon	do	J. W. Canon, superintendent.	1	1
2159	Shenandoah	do	W. N. Ehrhart	1	2
2160	Slatington	do	J. J. Savitz	1	0
2161	Somerset	do	Grant Kendall	3	0
2162	South Bethlehem	Excelsior High School	M. Alton Richards	2	0
2163	Spartansburg	High School (department)	W. S. Smith	1	2
2164	Springboro	do		1	2
2165	Steelton	High School	Chas. S. Davis	2	0
2166	Stroudsburg	do	Will H. Ramsey	1	0
2167	Summit Hill	do	Wm. McLaughlin	1	0
2168	Sunbury	do	C. D. Oberdorf	2	0
2169	Susquehanna	High School (department)	C. T. Thorpe	1	1
2170	Tamaqua	High School	J. F. Derr	1	2
2171	Thurlow	South Chesterboro High School.	W. A. Storrie	1	2
2172	Tidioute	High School	R. D. Crawford	1	1
2173	Titusville	do	Miss L. M. Wilson	2	6
2174	Trevorton	do	P. S. Bergstresser	1	0
2175	Tyrone	High School (department)	B. F. Pinkerton	2	2
2176	Ulysses	do	Miss Ada W. Horton	0	3
2177	Upland	High School	Henry S. Borreman	1	0
2178	Warren	Warren Academy	Miss Jessie E. Allen	0	3
2179	Waynesboro	High School	A. J. Harbaugh	1	1
2180	Weatherly	do	C. A. Ritter	3	1
2181	Wellsboro	do	H. E. Raesly	1	2

a Also give instruction in other departments.

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igh Schools for 1889-90—Continued.

Students n second-ary grade.		Colored pupils in-cluded.		Number prepar-ing for college classical course.		Number prepar-ing for college scien-tific course.		Number of stu-dents whograd-uated or com-pleted their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in li-brary.	Value of grounds, buildings, and apparatus.	Amount of State and munici-pal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
15	35	0	0	.....	.....	.....	.....	4	8	Yes.	No..	100	$30,000	$1,123	$40	2122
33	47	0	0	0	0	.....	.....	1	9	No..	No..	250	12,000	780	121	2123
16	29	0	0	.....	.....	.....	.....	2	3	No..	No..	1,500	25,200	806	405	2124
5	23	.....	.....	.....	.....	.....	.....	.....	.....	Yes.	No..	200	40,200	.....	.....	2125
26	33	0	0	.....	.....	.....	.....	3	11	Yes.	.....	100	40,000	2,700	.....	2126
16	29	4	3	2	0	.....	.....	1	3	Yes.	No..	200	10,025	.....	50	2127
13	15	0	0	.....	.....	.....	.....	2	4	No..	No..	220	8,000	.....	.....	2128
15	35	0	0	1	0	2	0	3	8	Yes.	No..	200	200	.....	60	2129
25	35	.....	1	10	10	10	8	6	6	Yes.	No..	600	100,600	6,000	100	2130
56	72	.....	3	15	10	.....	.....	4	8	No..	No..	500	23,500	3,500	700	2131
18	22	.....	.....	2	3	10	15	2	8	No..	No..	300	9,050	500	30	2132
14	25	3	2	0	0	.....	.....	1	7	Yes.	No..	100	7,425	419	190	2133
88	128	1	1	2	1	4	0	18	23	Yes.	No..	4,000	50,600	.....	900	2134
20	34	0	0	8	20	6	0	3	6	Yes.	Yes.	125	15,250	862	612	2135
6	14	.....	.....	.....	.....	.....	.....	2	3	Yes.	.....	100	10,000	400	.....	2136
10	9	1	0	4	1	4	1	5	2	No..	No..	0	2,533	595	.....	2137
7	16	0	0	0	0	0	0	1	0	No..	No..	0	.....	.....	.....	2138
5	12	1	3	3	0	2	9	4	5	Yes.	No..	23	3,615	650	75	2139
685	0	3	0	150	0	.....	.....	0	76	Yes.	No..	3,000	210,000	47.519	.....	2140
24	35	0	0	0	0	0	0	4	13	Yes.	No..	600	3,600	2,400	450	2141
311	455	2	3	13	3	.....	.....	68	62	Yes.	.....	2,000	210,000	30,000	1,500	2142
10	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2143
40	68	.....	1	0	0	0	0	0	8	Yes.	No..	200	50,200	250	450	2144
10	13	0	0	.....	.....	.....	.....	6	8	No..	No..	50	33,100	.....	325	2145
10	18	.....	.....	.....	.....	.....	.....	.....	.....	Yes.	.....	15	10,000	270	100	2146
53	53	0	0	0	0	.....	.....	6	7	No..	No..	2,000	33,525	3,657	50	2147
64	69	0	0	5	2	15	5	13	27	No..	No..	200	100,300	.....	250	2148
166	0	0	0	8	0	13	...	29	0	No..	No..	500	65,000	10,000	.....	2149
0	189	.....	.....	.....	.....	.....	.....	0	45	Yes.	No..	300	30,500	.....	.....	2150
32	33	0	0	0	0	2	0	3	10	Yes.	No..	400	75,100	1,800	300	2151
5	7	.....	.....	.....	.....	.....	.....	0	3	Yes.	No..	.....	13,100	106	85	2152
9	10	0	0	0	0	.....	.....	0	0	Yes.	No..	90	14,080	332	134	2153
27	16	.....	.....	.....	.....	.....	.....	2	4	No..	No..	275	2,500	1,748	37	2154
40	160	0	0	0	0	2	1	5	19	No..	No..	200	75,200	.....	144	2155
40	13	0	0	0	0	.....	.....	0	0	No..	No..	50	6,100	293	259	2156
37	44	0	0	0	0	0	0	7	9	No..	No..	200	30,200	.....	85	2157
12	40	0	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2158
30	57	0	0	0	0	.....	.....	10	10	Yes.	No..	1,723	200	.....	.....	2159
15	17	0	0	2	1	.....	.....	2	2	Yes.	No..	250	20,000	.....	.....	2160
30	50	0	0	2	5	4	7	5	5	No..	No..	.....	100,000	.....	.....	2161
30	32	0	1	0	0	3	0	5	13	Yes.	No..	163	20,300	.....	60	2162
27	39	0	0	0	0	.....	.....	0	4	No..	No..	280	2,560	284	158	2163
27	30	0	0	1	4	.....	.....	0	2	No..	No..	45	5,000	218	170	2164
40	30	4	0	.....	.....	.....	.....	7	9	Yes.	No..	1,700	50,450	3,500	45	2165
11	16	4	6	.....	.....	.....	.....	.....	.....	No..	No..	0	15,000	745	150	2166
4	17	0	0	0	0	.....	.....	5	1	Yes.	No..	0	17,000	759	.....	2167
30	48	0	0	4	0	.....	.....	4	16	No..	No..	400	8,050	2,000	.....	2168
40	48	0	0	4	0	3	0	4	7	Yes.	No..	0	25,100	1,092	75	2169
40	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2170
9	18	.....	1	0	0	.....	.....	2	3	Yes.	No..	30	15,400	1,968	20	2171
13	21	0	0	.....	.....	.....	.....	1	2	Yes.	No..	2,000	1,800	.....	.....	2172
49	104	0	0	5	9	.....	.....	4	32	Yes.	No..	230	65,775	2,852	243	2173
17	25	0	0	.....	.....	.....	.....	0	0	No..	No..	0	3,000	500	.....	2174
46	69	10	18	0	0	0	0	4	6	Yes.	No..	500	48,100	11,400	75	2175
21	30	.....	8	0	0	0	0	0	0	No..	No..	195	2,525	201	200	2176
12	20	0	0	0	0	0	0	1	3	No..	No..	35	12,000	918	10	2177
27	44	0	0	.....	.....	.....	.....	8	11	No..	No..	50	400	.....	652	2178
12	40	3	3	.....	.....	.....	.....	1	9	Yes.	No..	475	40,100	7,920	100	2179
11	15	0	0	0	0	.....	.....	.....	.....	Yes.	No..	200	12,550	847	.....	2180
55	86	0	0	2	0	1	0	8	7	No..	No..	300	25,050	940	450	2181

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TABLE 3.—*Statistics of Pub*

	State and post-office.	Name of institution.	Name of principal.	Number "secondary" instructors	
				Male.	Female.
	1	2	3	4	5
	PENNSYLVANIA—continued.				
2182	West Chester	High School	Addison Jones	3	1
2183	White Haven	High School (department)	Wm. F. Porter	2	3
2184	Wiconisco	High School	Robert L. Myers	2	
2185	Williamsport	do	W. W. Kelchner	1	4
2186	Wrightsville	do	S. H. Bradley	3	5
2187	York	do	A. Wanner	2	1
2188	Youngsville	do	J. N. Shumway	1	0
	RHODE ISLAND.				
2189	Ashaway	Hopkinton Graded School	Chas. W. Moore	1	0
2190	Barrington Center	High School	Walter H. Russell	1	1
2191	Bristol	do	J. E. Crane	1	1
2192	Central Falls	do	Wm. Overton	(a)	
2193	East Providence	do	Irving W. Horne	1	1
2194	Newport	Rogers High School	Frank E. Thompson	2	3
2195	Olneyville	Johnston High School	Geo. H. Currier	1	2
2196	Pawtucket	High School	W. W. Curtis	3	2
2197	Peace Dale	South Kingstown High School.	Sumner Mowry	1	2
2198	Providence	High School	David W. Hoyt	12	14
2199	Warren	do	O. R. Cook	1	2
2200	Westerly	do	E. C. Williard	3	4
2201	Woonsocket	do	J. W. V. Rich	3	3
	SOUTH CAROLINA.				
2202	Bennettsville	Marlboro Graded School	Rob't C. Root	2	3
2203	Brunson	High School (department)	D. H. Behré	1	0
2204	Charleston	Memminger High School	Miss A. R. Simonton	0	12
2205	Columbia	High School	D. B. Johnson, superintendent.	3	3
2206	Dorroh	do	W. C. Winer	1	1
2207	Lexington	High School (department)	P. T. Brodie	1	2
2208	Pine Ridge	Pine Ridge Academy	M. H. Yount	1	0
2209	Union	Union Graded School	C. A. Graeser, jr	1	2
	SOUTH DAKOTA.				
2210	Aberdeen	High School (department)	Mrs. E. M. Lovejoy	1	2
2211	Deadwood	High School	Alexander Strachan	1	1
2212	Huron	do	Miss Emma Younglove	1	3
2213	Mitchell	do	Miss J. M. J. Pryne	0	2
2214	Sioux Falls	do	R. B. McClenon	1	3
2215	Yankton	do	J. D. Stay	1	1
	TENNESSEE.				
2216	Ashland City	Ashland City Institute	Sam'l Lenox	1	1
2217	Brazil	High School	Jno. C. Wright	2	1
2218	Chattanooga	do	A. T. Barrett	2	4
2219	Clarksville	do	Miss Jennie O. Jackson		3
2220	Cleveland	do	D. C. Arnold	1	0
2221	Dandridge	Maury Academy	John T. Henderson	1	1
2222	Dyersburg	High School (department)	H. S. Kennedy	1	3
2223	Fall Branch	High School	Wm. M. Vines	(a)	2
2224	Jonesboro	do	Charles Mason	1	1
2225	Knoxville	High School (girls')	W. T. White	1	4
2226	Laurel Gap	Oakland Seminary	Wilbur W. Weems	2	1
2227	Memphis	Leath School	Miss M. L. Scudder	0	6
2228	Mount Horeb	High School	Jones M. Hicks	1	1
2229	Rheatown	Male and Female Academy	W. F. Piper	1	1
2230	Thorn Grove	High School	E. R. Cate	1	1

a Also give instruction in other departments.

Google

High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
21	45	1	4	3	1	2	0	2	3	Yes.	No..	1,200	$100,240	$2,160	.....	2182
20	35	.....	.....	.....	2	.....	.....	4	10	No..	No..	300	15,000	300	$287	2183
30	40	0	0	7	10	1	0	4	5	Yes.	No..	2,500	40,275	800	.....	2184
62	122	.....	3	6	2	12	0	9	16	Yes.	No..	3,000	50,300	8,000	135	2185
15	16	.....	.....	0	0	0	0	.....	.....	No..	No..	0	20,000	.....	107	2186
48	71	2	3	.....	.....	.....	.....	1	12	No..	No..	350	30,275	.....	45	2187
12	12	0	0	0	0	.....	.....	5	4	Yes.	No..	500	8,500	.....	40	2188
20	17	1	0	8	8	5	2	0	0	No..	No..	100	4,535	575	.....	2189
9	15	.....	.....	0	0	0	0	0	2	No..	No..	30	25,500	4,549	75	2190
24	32	1	2	3	0	.....	.....	2	6	No..	No..	.....	300	.....	25	2191
21	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2192
37	75	0	0	6	2	.....	.....	1	9	No..	No..	25	10,225	3,000	30	2193
59	70	3	5	9	7	.....	.....	7	1	Yes.	Yes.	400	30,000	.....	920	2194
27	25	0	0	5	5	1	0	1	3	No..	No..	200	20,100	3,000	0	2195
63	88	.....	.....	21	11	5	0	8	14	Yes.	No..	500	16,200	.....	480	2196
25	26	0	0	1	1	0	0	1	0	Yes.	No..	200	6,000	.....	1,500	2197
316	541	4	1	.....	.....	.....	.....	45	61	No..	No..	1,700	218,500	.....	2,880	2198
16	31	.....	.....	3	8	.....	.....	4	2	No..	No..	650	5,300	.....	150	2199
30	74	0	0	4	8	.....	.....	10	2	No..	No..	985	40,250	.....	600	2200
44	70	0	0	5	1	3	0	2	9	No..	No..	250	40,700	.....	200	2201
20	55	0	0	.....	.....	0	.....	0	3	Yes.	No..	0	5,675	2,050	1,350	2202
3	7	0	0	2	2	3	2	3	2	No..	No..	400	4,100	1,200	375	2203
0	262	.....	.....	.....	.....	.....	.....	0	13	Yes.	No..	.....	21,000	4,000	.....	2204
18	45	10	15	.....	.....	.....	.....	0	13	.....	.....	.....	.....	.....	.....	2205
20	15	0	0	0	1	.....	.....	0	0	No..	No..	.....	350	150	250	2206
17	22	0	0	10	12	.....	.....	0	0	No..	No..	0	2,050	185	.....	2207
2	4	0	0	1	2	.....	.....	0	1	No	No..	0	500	141	134	2208
24	10	0	0	.....	.....	.....	.....	4	2	No..	No..	50	1,500	1,200	350	2209
20	25	0	1	2	2	6	2	.....	.....	No..	No..	300	40,100	.....	500	2210
9	18	0	0	.....	.....	.....	.....	0	0	.....	.....	.....	20,000	.....	.....	2211
48	70	0	0	3	2	0	0	2	0	No..	No..	150	14,300	3,000	360	2212
9	32	0	0	.....	.....	.....	.....	1	5	No..	No..	60	8,000	6,500	0	2213
26	57	0	1	0	0	3	5	0	3	No..	No..	300	50,150	.....	.....	2214
15	19	0	0	15	19	.....	.....	0	5	No..	No..	100	30,500	.....	.....	2215
4	10	0	0	.....	.....	.....	.....	.....	.....	No..	No..	400	2,000	.....	.....	2216
26	24	0	0	.....	.....	.....	.....	0	0	No..	No..	0	2,000	1,250	400	2217
50	92	6	14	.....	.....	.....	.....	6	25	Yes.	No..	.....	.....	.....	322	2218
25	38	.....	.....	.....	.....	.....	.....	5	7	Yes.	No..	600	.....	.....	.....	2219
15	23	0	0	0	0	.....	.....	7	5	No..	No..	0	15,200	3,800	300	2220
50	40	0	0	0	0	50	40	0	0	No..	No..	0	5,050	480	250	2221
50	56	0	0	5	0	0	0	4	5	No..	No..	50	20,500	2,600	300	2222
11	7	0	0	0	0	0	0	0	0	Yes.	No..	0	1,500	700	300	2223
10	28	0	0	5	7	0	0	3	5	Yes.	No..	50	6,100	1,250	1,300	2224
8	100	0	0	0	0	0	0	1	16	No..	No..	872	38,200	0	0	2225
19	15	0	0	3	2	6	4	.....	.....	No..	No..	105	3,500	424	367	2226
60	135	0	0	0	0	0	0	1	7	No..	No..	0	53,000	.....	350	2227
7	6	0	0	2	5	0	0	0	0	No..	No..	0	1,550	278	202	2228
2	5	0	0	2	5	.....	.....	0	0	No..	No..	153	1,500	175	56	2229
27	23	0	0	4	2	8	3	8	3	No..	No..	0	1,300	600	300	2230

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	TEXAS.				
2231	Abilene	High School	C. G. Foust	1	1
2232	Anna	do	J. M. Robinson	1	1
2233	Athens	Athens Institute	W. I. Cowles	2	1
2234	Austin	High School	I. H. Bryant	2	3
2235	Beaumont	do	C. F. Johnston	1	0
2236	Bellville	High School (department)	W. A. Trenchman	1	0
2237	Blanco	High School	W. H. Bruce	2	3
2238	Brackettville	High School (department)	E. P. Lord, A. M.	1	3
2239	Bremond	Educational Institute	J. B. Wolfe	1	1
2240	Brenham	High School	Miss Mary Rial	2	2
2241	Bryan	do	A. L. Banks	4	0
2242	Burnet	do	R. J. Richey	1	0
2243	Caddo Mills	do	H. M. Pile	2	1
2244	Calvert	High School (white)	A. W. Kinnard	2	0
2245	do	High School (colored)	do	3	0
2246	Campbell	do	C. A. Neville, M. A	2	2
2247	Centerville	do	C. A. Leaverton	2	0
2248	Cleburne	High School (department)	J. M. Johnson	1	2
2249	Coleman	do	Z. B. Whitehurst	2	3
2250	Colorado	High School	Jacob I. Hill	1	0
2251	Comanche	High School (department)	C. O. Smith	3	3
2252	Corpus Christi	do	Chas. W. Crossby	1	1
2253	Corsicana	High School	Wm. Lipscomb	1	1
2254	Dallas	do	T. G. Harris	4	2
2255	Eddy	Literary and Scientific Institute.	A. B. Harmer	0	2
2256	El Paso	High School	Miss Ella B. Meekins	1	2
2257	Floyd	do	W. A. Priest	1	1
2258	Galveston	Ball High School	Jno. W. Hopkins, A. M	3	3
2259	Gonzales	High School (department)	Oscar Chrisman	1	0
2260	Graybill	Seven Points College	J. M. Harder	2	0
2261	Hallettsville	High School (department)	J. C. Florea	1	3
2262	Harwood	Harwood Academy	R. U. Barkley	1	1
2263	Hempstead	High School	S. H. Dean	2	0
2264	Houston	do	C. W. Welch	3	1
2265	Hubbard	do	F. A. Hall	1	0
2266	Itasca	do	N. J. Foster	3	2
2267	Kingston	Calhoun College	T. E. Wallis, A. M	3	1
2268	La Grange	High School	T. R. Dunlap	1	1
2269	Leesburg	East Texas Academic Institute	I. C. Lamar	0	2
2270	Llano	High School (department)	P. H. Hargon	1	4
2271	Lone Oak	High School	W. H. Attebery	2	2
2272	Luling	Pierce Institute	F. G. Gambrilt	1	0
2273	McGregor	High School (department)	J. N. Davis, reporting officer.	1	0
2274	McKinney	do	E. M. Faust, superintendent.	1	2
2275	Menardville	High School	J. W. Hunter	1	1
2276	Mexia	do	J. C. Blair	1	1
2277	Midlothian	do	G. F. Taylor	1	2
2278	Milan	Milan Institute	W. A. Toole	1	1
2279	Mineola	High School	Jas. M. Skinner	1	3
2280	Montague	do	J. H. Vaughan	1	0
2281	Nevada	do	G. W. Guyer	2	1
2282	Palestine	do	E. M. Pace	1	2
2283	Paris	do	W. S. V. Siebert	2	1
2284	Pirtle	High School (department)	A. S. Baskett	1	1
2285	Pottsboro	do	E. D. Macready	2	3
2286	Ranger	do	W. A. Dennis	1	2
2287	Rising Star	High School	B. F. Torry	2	0
2288	Roby	do	D. Speer	1	2
2289	Rockdale	High School (department)	John W. Clark	2	0

a Also give instructions in other departments.

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High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
30	40	0	0	4	10	2	0	2	8	Yes.	No..	200	$1,550	$10,000	$150	2231
6	7	0	0	0	0	.....	.....	0	0	No..	No..	0	12,000	720	175	2232
24	27	0	0	5	7	6	0	0	0	No..	No..	0	2,015	487	1,180	2233
59	77	2	3	.....	.....	.....	.....	1	18	No..	No..	720	300	0	114	2234
5	10	0	0	1	0	0	0	0	0	No..	No..	0	10.100	900	90	2235
10	20	0	0	.....	.....	.....	.....	4	7	No..	Yes.	200	2,350	2,300	350	2236
30	35	0	0	.....	.....	.....	.....	4	4	No..	No..	100	10,000	1,400	300	2237
24	24	0	0	.....	.....	.....	.....	1	3	No..	No..	1	2,000	3,600	144	2238
12	18	0	0	.....	.....	.....	.....	3	2	No..	No..	0	6,040	1,800	75	2239
18	45	.....	.....	7	8	10	26	5	7	Yes.	No..	357	27,406	12,650	350	2240
37	54	5	11	2	13	5	10	7	10	No..	No..	.....	26,350	7,961	1,575	2241
18	37	16	32	.....	.....	.....	.....	0	0	No..	No..	100	6,250	1,296	446	2242
20	15	0	0	15	10	5	5	0	0	No..	No..	0	1,200	800	400	2243
24	21	0	0	5	15	4	0	0	0	No.	No..	400	12,150	1,800	220	2244
25	20	135	170	2	4	3	0	0	0	Yes.	Yes.	300	12,600	5,600	768	2245
19	27	0	0	1	0	4	0	3	3	No..	No..	300	5,010	900	2,150	2246
8	10	0	0	0	0	0	0	0	0	No..	No..	0	1,500	800	.....	2247
15	36	30	43	10	8	5	28	0	1	No..	No..	415	3,050	7,000	235	2248
15	20	0	0	.....	.....	.....	.....	.....	.....	No..	No..	325	8,100	3,330	450	2249
4	18	.....	.....	.....	.....	.....	.....	0	0	Yes.	No..	0	5,000	.....	.....	2250
34	40	0	0	.....	.....	.....	.....	4	3	Yes.	No..	0	15,000	2,865	439	2251
9	12	30	45	3	2	.....	.....	0	0	No..	No..	0	20,000	4,564	150	2252
10	27	0	0	.....	.....	.....	.....	4	4	No..	No..	100	35,500	19,667	347	2253
47	143	.....	.....	.....	.....	.....	.....	1	4	No..	No..	.....	75,500	6,410	.....	2254
3	4	0	0	1	1	2	3	0	0	No..	No..	100	3,075	400	800	2255
15	22	0	0	6	9	.....	.....	3	2	No..	No..	160	25,150	4,172	172	2256
20	15	0	0	.....	.....	.....	.....	12	13	No..	No..	12	1,250	300	.....	2257
50	100	0	0	.....	.....	.....	.....	7	23	Yes.	No..	1,500	175,250	68,284	.....	2258
9	12	40	66	.....	.....	.....	.....	0	0	Yes.	No..	200	32,850	18,660	2,062	2259
14	4	0	0	6	1	8	3	8	4	No..	No..	.....	3,006	500	1,000	2260
13	22	0	0	0	0	4	6	.....	.....	No..	No..	0	4,520	1,350	.....	2261
7	6	0	0	0	0	0	0	0	0	No..	No..	0	250	394	50	2262
5	9	0	0	0	0	0	0	1	5	Yes.	No..	0	16,100	2,000	150	2263
22	86	0	0	.....	.....	.....	.....	1	10	No..	No..	300	30,700	4,500	162	2264
10	10	0	0	.....	.....	.....	.....	0	0	Yes.	No..	0	12,050	.....	.....	2265
29	39	0	0	4	8	4	8	0	0	No..	No..	0	4,040	1,950	700	2266
25	15	0	0	20	0	1	0	0	0	No..	No..	600	5,200	900	1,500	2267
29	32	0	0	.....	.....	.....	.....	0	0	No..	No..	.....	1,600	900	3,000	2268
15	20	0	0	2	3	0	0	1	3	No..	No..	0	500	375	250	2269
30	50	0	0	0	0	0	0	0	0	No..	No..	0	10,100	900	100	2270
24	27	0	0	.....	.....	.....	.....	0	0	No..	No..	.....	2,000	785	1,182	2271
7	13	0	0	2	0	.....	.....	0	0	Yes.	No..	326	12,050	1,000	90	2272
7	7	.....	.....	.....	.....	.....	.....	2	3	.....	.....	.....	.....	.....	.....	2273
23	44	.....	.....	3	17	5	2	.....	.....	Yes.	No.	250	35,650	5,500	300	2274
20	20	0	0	9	8	.....	.....	.....	.....	No..	No..	150	1,100	500	.....	2275
40	35	.....	.....	5	25	35	10	2	3	No..	No..	450	14,300	5,760	1,200	2276
10	12	0	0	.....	.....	.....	.....	0	0	No..	No..	0	2,015	750	250	2277
20	25	0	0	7	7	.....	.....	.....	.....	.....	No..	.....	200	300	.....	2278
45	40	0	0	25	30	20	10	5	6	No..	No..	25	10,020	1,000	900	2279
8	7	0	0	0	0	0	0	2	3	No..	No..	0	6,575	935	1,000	2280
14	6	0	0	0	0	.....	.....	0	0	No..	No..	0	5,000	538	165	2281
35	55	0	0	.....	.....	.....	.....	.....	.....	No..	No..	20	30,250	.....	.....	2282
22	53	0	0	.....	.....	.....	.....	0	8	No..	No..	200	.....	.....	.....	2283
4	6	0	0	0	0	4	3	0	0	No..	No..	0	630	311	.....	2284
125	110	0	0	0	0	.....	.....	0	5	Yes.	No..	0	4,100	710	1,050	2285
19	23	0	0	0	0	0	0	0	0	No..	No..	39	2,000	1,000	375	2286
16	14	0	0	4	0	6	0	0	0	No..	No..	0	2,500	1,000	505	2287
53	68	0	0	.....	.....	.....	.....	0	0	No..	No..	0	2,000	552	135	2288
20	24	0	0	8	6	4	5	4	6	Yes.	No..	0	11,850	1,288	924	2289

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TABLE 3.—*Statistics of Publ*

	State and post-office.	Name of institution.	Name of principal.	Number "secondary" structu	
				Male.	Female
	1	2	3	4	5
	TEXAS—continued.				
2290	San Angelo	High School (department)	H. V. Moulton	1	
2291	San Antonio	High School	W. Schoch	1	
2292	Sealy	High School (department)	J. W. Jennett	1	
2293	Shelbyville	High School	M. M. Dupre	1	
2294	Snyder	High School (department)	W. T. Mann	1	
2295	Terrell	do	C. P. Hudson	1	1
2296	Uvalde	do	W. J. Spillman, superintendent.	2	0
2297	Vernon	do	Joe H. Eagle, A. B	2	
2298	do	do	T. S. Cox	2	
2299	Waco	Central High School	J. N. Gambrill	1	
2300	Weatherford	High School	S. A. Morrow	2	
2301	Whitney	do	J. T. Hall	1	
2302	Whitt	Parker Institute	A. Bennett	3	1
	UTAH.				
2303	Ogden	Central School	T. B. Lewis	1	0
	VERMONT.				
2304	Barre	High School (department)	O. D. Matthewson, A. B	1	
2305	Barton	Academy and Graded School.	Thomas Martin	1	1
2306	Barton Landing	High School	Miss Hattie E. Glazier	0	2
2307	Bellows Falls	do	J. C. Simpson	1	
2308	Bethel	do	J. H. Blaisdell	2	
2309	Bradford	Bradford Academy	D. B. Locke	1	
2310	Brandon	High School	Ed. H. Datcher	1	1
2311	Brattleboro	do	E. H. McLachlin	2	5
2312	Burlington	do	S. W. Landon	2	4
2313	Chester	High School and Academy	E. A. Burnet	1	1
2314	Danville	Phillips Academy and Danville Graded School.	Miss M. L. Martin	0	
2315	Enosburg Falls	High School (department)	L. M. Jenne	1	4
2316	Essex Junction	High School	Miss J. B. Jackman	0	2
2317	Fair Haven	High School (department)	Otis S. Johnson	1	1
2318	Hardwick	Academy and Graded School.	Don F. Andrus	1	
2319	Hinesburg	High School	H. M. Page	1	0
2320	Hyde Park	Lamoille Central Academy	J. H. Macomber	1	
2321	Island Pond	High School	S. L. Fagg	1	5
2322	Ludlow	Black River Academy	Geo. Sherman	1	3
2323	Lyndon	Academy and Graded School.	Chas. A. Williams	1	0
2324	Middlebury	High School (department)	J. W. Wheeler	1	
2325	Middletown Springs	do	John I. Fennell	1	
2326	Milton	do	Henry Babcock	1	4
2327	Montpelier	Washington County Grammar and Montpelier Union Schools.	X. C. Wheeler, A. B	1	
2328	Morrisville	People's Academy and Morrisville Graded Schools.	W. A. Beebe	1	4
2329	Newport	High School	Frank L. Bugbee	1	3
2330	North Bennington	do	H. Dressel, jr	1	1
2331	Northfield	do	Henry O. Aiken	1	1
2332	Poultney	do	W. C. Tifft	1	0
2333	Proctor	do	F. P. Davison	1	0
2334	Quechee	do	C. A. Crooks, A. M	1	
2335	Richford	do	James C. Flagg	1	1
2336	Rutland	do	George G. Wilson	2	3
2337	St. Albans	St. Albans Academy and Franklin County Grammar School.	F. H. Dewart	1	3

a Also give instructions in other departments.

Google

High Schools for 1889-90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889-90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
8	12	6	0	8	12	0	0	0	3	Yes.	No..	25	$40,000	$2,500	$125	2290
11	27	0	0	.....	.....	0	4	0	4	No..	No..	44	58,500	.....	.....	2291
5	10	0	0	.....	.....	.....	.....	0	0	No..	No..	0	3,575	1,400	.....	2292
10	4	0	0	.....	.....	.....	.....	3	2	No..	No..	0	2,600	250	1,200	2293
20	20	0	0	0	6	0	0	0	0	No..	No..	0	1,500	2,840	50	2294
15	35	0	0	.....	.....	.....	.....	1	7	Yes.	No..	300	25,060	5,000	1,000	2295
7	20	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	3,060	4,500	50	2296
35	15	0	0	15	20	5	10	0	0	No..	No..	50	30,580	2,000	100	2297
15	30	0	0	5	7	2	1	0	0	No..	No..	75	30,100	9,000	50	2298
25	50	2	6	.....	.....	.....	.....	1	5	No..	No..	750	4,050	.....	150	2299
5	12	0	0	4	10	.....	.....	.....	0	No..	No..	400	20,150	2,750	250	2300
20	33	.....	.....	.....	.....	.....	.....	0	0	No..	No..	200	3,500	1,350	.....	2301
17	18	0	0	.....	.....	.....	.....	0	0	No..	No..	0	2,000	240	760	2302
15	20	0	0	0	0	0	0	0	0	No..	No..	350	85,500	.....	.....	2303
10	15	0	0	0	0	.....	.....	0	0	Yes.	No..	500	17,500	.....	25	2304
20	35	0	0	3	10	0	0	3	0	Yes.	No..	0	5,000	.....	225	2305
.....	.....	0	0	0	0	.....	.....	0	0	Yes.	No..	0	5,070	1,075	40	2306
28	31	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2307
12	25	0	0	2	0	.....	.....	6	6	No..	No..	200	5,000	.....	150	2308
31	50	0	0	3	3	0	21	0	9	No..	No..	2,000	2,300	1,200	440	2309
12	18	0	0	6	7	8	5	1	3	No..	Yes.	225	25,150	.....	300	2310
80	95	0	0	1	2	0	0	5	18	No..	No..	200	60,300	.....	500	2311
85	115	2	1	30	15	25	20	18	19	No..	No..	350	50,200	5,000	900	2312
31	51	0	0	2	1	.....	.....	0	6	No..	No..	50	6,000	1,300	42	2313
.....	.....	0	0	0	0	0	0	0	0	Yes.	No..	0	3,000	100	25	2314
30	44	0	0	0	0	0	0	0	0	Yes.	No..	20	3,500	500	.....	2315
8	19	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	.....	.....	2316
25	30	0	0	0	0	3	0	8	7	Yes.	No..	150	10,125	5,000	180	2317
15	15	0	0	6	8	3	2	.....	.....	Yes.	No..	150	1,050	275	150	2318
28	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2319
26	24	2	1	5	3	.....	.....	0	0	No..	No..	200	1,000	.....	35	2320
.....	.....	0	0	.....	.....	.....	.....	1	5	Yes.	No..	100	4,050	.....	36	2321
62	87	0	0	5	3	17	21	5	4	Yes.	No..	150	20,050	1,800	668	2322
10	17	0	0	0	2	.....	.....	4	2	Yes.	No..	35	.....	.....	.....	2323
29	34	0	0	11	2	0	0	3	4	Yes.	No..	150	50,000	.....	650	2324
6	4	0	0	.....	.....	.....	.....	2	1	.....	No..	.....	1,000	.....	36	2325
31	32	0	0	1	0	0	0	0	0	Yes.	No..	0	2,500	264	123	2326
12	25	0	1	0	0	.....	.....	3	3	Yes.	No..	3,000	31,000	3,767	200	2327
30	57	0	0	6	2	3	4	1	2	No..	No..	500	15,350	381	895	2328
32	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2329
15	28	1	0	.....	.....	2	1	2	1	Yes	No..	0	12,250	.....	430	2330
26	30	0	0	2	3	0	0	2	4	No.	No..	250	.....	.....	325	2331
12	16	0	1	0	0	2	2	0	0	Yes.	No..	0	15,100	576	70	2332
9	26	0	0	0	0	0	0	0	0	Yes.	No..	25	120	.....	.....	2333
.....	.....	0	0	0	0	0	0	0	0	Yes.	No..	70	5,040	353	47	2334
32	25	0	0	1	0	2	0	2	2	No	No..	5	3,000	.....	152	2335
40	58	0	0	18	24	.....	.....	0	0	No..	No..	1,000	200	25,000	150	2336
39	68	0	0	3	3	0	0	0	3	No..	No..	200	25,400	3,800	500	2337

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	VERMONT—cont'd.				
2338	Springfield	High School	G. S. Johnson	1	1
2339	Swanton	High School (department)	F. K. Graves	1	1
2340	Vergennes	do	Alfred B. Morrill	1	4
2341	Wallingford	do	Elmer F. Howard	1	2
2342	Waterbury	do	F. A. Fernald	1	6
3443	West Randolph	High School	N. J. Whitehill, A. M.	1	2
2344	White River Junction.	do	Ozora S. Davis	1	1
2345	Windsor	do	F. N. Newell	1	66
2346	Winooski	do	John A. Hartigan	1	6
2347	Woodstock	do	Alvin B. Bishop, A. M	2	1
	VIRGINIA.				
2348	Adrian	Guinea High School	Chas. W. Crawley	1	2
2349	Berryville	High School	I. C. Fletcher	1	1
2350	Brookings	Providence High School	Edwin G. Holland	1	33
2351	Covington	High School (department)	R. J. Dickey	1	0
2352	Danville	High School	W. M. Chalmers	(2)	
2353	Fairview	do	Rev. F. T. Mathews	1	1
2354	Fox	Fox Institute	J. J. Watkins	1	1
2355	Fredericksburg	High School	William Nelson	1	1
2356	Hadensville	do	Miss M. E. Mitchell	0	1
2357	Johnson Springs	Dover High School	Miss M. A. E. Ellis	0	1
2358	Lawrenceville	High School (department)	Miss Lulu Davie	0	1
2359	Leesburg	High School	J. S. Simpson	2	1
2360	Lincoln	Lincoln Academy	Edward C. James	1	1
2361	Luray	High School (department)	H. Sheffey Roller	2	0
2362	Lynchburg	High School	E. C. Glass, superintendent	(8)	
2363	Manchester	High School (colored)	James H. Blackwell	4	3
2364	do	High School (white)	A. H. Fitzgerald	2	0
2365	Meherrin	Meherrin Academy	O. L. Hardy	1	0
2366	Milboro Springs	High School (department)	H. P. Cosby	1	1
2367	Myrtle	Myrtle Graded Male and Female Academy.	Miss M. E. Eley	0	2
2368	New Market	High School (department)	A. C. Kimler	1	3
2369	North Danville	High School	F. H. Wheatley	1	0
2370	Palmyra	Central High School	W. T. Morton	1	44
2371	Parnassus	High School	M. C. Smith	1	0
2372	Pattonsville	do	R. Hurst	1	1
2373	Petersburg	High School (white)	A. P. Bolling	1	3
2374	do	Peabody High (colored)	J. E. Shields	1	0
2375	Portsmouth	High School	Willis A. Jenkins	1	1
2376	Richmond	High School (white)	Julian P. Thomas	2	17
2377	Rural Retreat	High School (department)	E. L. Greever	1	1
2378	Rustburg	do	John G. Fisher	1	1
2379	Rye Cove	Washington Institute	Robert E. Wolfe	2	1
2380	Snickersville	High School (department)	John T. James	1	1
2381	Spring Valley	High School	J. A. Livesay	2	1
2382	Strasburg	do	R. H. Sheppe	2	2
2383	Surry	"Cosnaham No. 1"	Miss Anna Friend	0	2
2384	Turkey Cove	Turkey Cove Seminary	R. N. Price, jr	1	1
2385	Waterford	High School (department)	William B. Carr	1	1
2386	Woodstock	do	J. Luther Sheppe	1	63
2387	Worsham	Worsham School No. 1	Mrs. P. F. Thackston	0	2
2388	Wytheville	High School (department)	Miss Emma R. Calfee	0	2
	WASHINGTON.				
2389	Olympia	High School	Miss May Bly	1	2
2390	Spokane Falls	do	J. B. Walker	2	1
2391	Tacoma	do	Miss Abbie E. Cushman	0	3

a Also give instruction in other departments.

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed their studies in 1889–90.		Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of State and municipal aid.	Income from tuition fees.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
25	29	0	1	0	0	3	10	2	2	No..	No..	50	$15	.....	.....	2338
21	30	.....	.....	5	0	4	3	5	4	No..	No..	.....	5,000	$500	$450	2339
12	18	1	0	4	0	0	0	5	5	Yes.	No..	30	1,600	4,793	173	2340
10	16	0	0	0	1	0	0	0	3	No..	No..	800	5,075	024	289	2341
5	18	.....	.....	.....	.....	.....	.....	0	3	Yes.	No..	200	2,000	2,222	.....	2342
46	56	0	0	5	10	2	0	6	14	Yes.	No..	200	15,050	.....	1,025	2343
24	25	0	0	11	9	4	0	2	2	Yes.	No..	50	20,075	.....	250	2344
27	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2345
7	18	0	0	2	2	.....	.....	1	2	Yes.	No..	104	8,125	900	.....	2346
40	56	0	1	10	24	.....	.....	1	6	Yes.	No..	100	7,200	1,136	492	2347
10	15	0	0	6	6	0	0	0	0	No..	No..	0	.....	350	40	2348
16	14	0	0	16	6	0	0	0	0	No..	No..	0	1,200	.....	250	2349
12	13	0	0	3	4	0	0	0	2	Yes.	No..	0	500	240	.....	2350
9	15	0	0	.....	.....	.....	.....	0	0	.....	No..	0	1,500	600	.....	2351
10	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2352
4	2	0	0	.....	.....	.....	.....	0	0	No .	No..	0	2,000	.....	.....	2353
20	24	0	0	10	16	8	2	0	0	No..	No..	0	1,200	300	100	2354
18	53	0	0	1	0	.....	.....	0	2	Yes.	No..	0	.....	.....	.....	2355
4	8	0	0	0	0	0	0	0	0	No..	No..	0	300	.....	.....	2356
14	18	0	0	0	0	0	0	2	3	No..	No..	0	.....	.....	.....	2357
20	10	0	0	6	5	.....	.....	1	1	No..	No..	0	500	.....	.....	2358
33	11	0	0	33	11	.....	.....	10	5	No..	No..	0	7,000	3,000	525	2359
16	17	0	0	3	0	0	0	5	5	No..	No..	15	2,520	725	0	2360
30	0	.....	.....	30	0	.....	.....	1	0	No..	No..	0	2,050	1,500	200	2361
75	177	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2362
8	17	8	17	.....	.....	0	0	0	0	No..	No..	81	10,125	3,000	0	2363
15	18	0	0	0	0	0	0	1	5	No..	No..	0	20,150	7,552	.....	2364
15	7	0	0	0	0	.....	.....	0	1	Yes.	Yes.	50	475	.....	150	2365
12	18	0	0	4	6	3	2	2	3	No..	No..	0	1,530	500	.....	2366
12	18	0	0	0	8	0	0	0	0	No..	No..	0	400	.....	403	2367
45	65	0	0	3	3	0	0	0	0	No..	No..	0	800	600	300	2368
12	21	0	0	0	0	0	0	0	2	No..	No..	0	12,025	.....	75	2369
21	21	0	0	12	11	3	0	4	6	No..	No..	0	800	859	616	2370
15	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2371
15	0	0	0	15	0	0	0	.....	.....	Yes.	No..	0	725	300	150	2372
78	126	0	0	2	1	1	0	2	9	No..	No..	300	5,250	10,226	452	2373
		13	38													2374
20	34	0	0	4	0	1	0	4	5	No..	No..	0	3,200	.....	.....	2375
134	321	0	0	0	0	0	0	5	56	No..	No..	1,000	405,000	142,000	2,000	2376
10	5	.....	.....	.....	.....	.....	.....	7	1	No..	No..	0	500	313	60	2377
15	12	0	0	3	2	1	0	0	0	No..	No..	50	1,025	720	78	2378
19	17	0	0	10	8	9	9	2	3	No..	No..	0	3,025	400	600	2379
8	5	.....	.....	0	0	1	2	.....	.....	No..	No..	0	1,000	.....	50	2380
20	15	0	0	0	0	.....	.....	1	1	Yes.	No..	40	4,000	250	500	2381
14	22	0	0	3	0	2	0	0	0	No..	No..	0	6,000	645	400	2382
10	10	0	0	2	4	.....	.....	0	0	No..	No..	0	600	250	50	2383
12	13	0	0	.....	.....	.....	.....	0	0	No .	No..	2	1,040	275	375	2384
7	7	.....	.....	4	4	3	3	2	0	No..	No..	0	5,000	360	50	2385
16	7	0	0	1	0	0	0	0	0	No..	No..	0	.....	.....	.....	2386
7	5	0	0	4	0	0	0	3	0	No..	No..	0	1,500	.....	5	2387
15	19	0	0	3	3	0	0	0	0	No..	No..	0	800	375	.....	2388
22	23	0	0	2	2	4	3	0	4	Yes.	No..	80	40,250	.....	.....	2389
23	27	0	0	5	2	0	0	0	0	No..	No..	11	90,100	.....	.....	2390
33	44	0	0	.....	.....	5	3	1	3	Yes.	No..	0	200	.....	.....	2391

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TABLE 3.—*Statistics of Public*

	State and post-office.	Name of institution.	Name of principal.	Number of "secondary" instructors.	
				Male.	Female.
	1	2	3	4	5
	WISCONSIN—cont'd.				
2515	Waukesha	High School	Geo. H. Reed	1	2
2516	Waupin	High School (North ward)	H. C. Curtis	1	1
2517	do	High School (South ward)	F. C. Howard	1	1
2518	Wausau	High School	Hugh McIndoe	2	1
2519	Wauwatosa	do	A. W. Smith	1	2
2520	West Bend	do	D. T. Keeley	1	1
2521	West De Pere	do	Chas. Mains. A. B	1	1
2522	Westfield	do	B. G. Woolcock	1	0
2523	West Salem	do	A. E. Buckmaster	1	1
2524	Whitewater	do	C. H. Sylvester	1	3
	WYOMING.				
2525	Cheyenne	High School	J. O. Churchill, superintendent.	(3)	
2526	Rawlins	do	J. B. Blazer	1	0

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High Schools for 1889–90—Continued.

Students in secondary grade.		Colored pupils included.		Number preparing for college classical course.		Number preparing for college scientific course.		Number of students who graduated or completed the course of study in 1889–90.																Gifts and bequests.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.															
6	7	8	9	10	11	12	13	14	15	16	17												21	22
																							619,358	781,983
																							1,361,040	411,479
44	58	0	0																				128,162	49,163
18	23	0	0	2	0	0	1																42,180	89,386
49	59	0	0	3	2	2	1																57,983	122,902
28	55	0	0																			157	29,993	39,353
21	28	0	0	3	5	0	1																	
45	35	0	0	0	0	2	1															524,306	816,285	89,503
15	28	0	0	4	5	2	2															166,430	61,711	27,230
15	41	0	0	0	0																	50,223	20,848	20,250
20	18	0	0	0	0	1																301,809	116,391	123,072
29	37	0	0	1	0	1	1															51,507	13,000	0
																						142,342	16,450	2,666
																						887,576	35,545	24,414
33	57																					313,387	15,030	164,009
																						0	301,011	1,065,780	40,044
14	15	0	0	16	25																			
																						0	21,243	1,100	7,030
																						9,200	85,449	41,210	11,825
																						0	31,565	5,000	50
																						10,505	111,132	5,500	10,455
																						0	1,875	0	0
																						2,718	102,408	4,705	10,596
																						6,277	27,793	1,838	798
																						20,011	75,810	68,809	6,880
																						4,520	8,599	0	1,559
																						43,500	4,883	74,752	8,972	2,412
																						50,600	15,422	93,150	3,315	4,450
																						42,375	14,034	69,932	3,175	2,682
																						41,000	8,320	53,973	5,120	2,735
																						300	1,550	76,120	2,598	70
																						22,600	19,718	53,553	17,000	2,675
																						10,000	1,057	16,524	1,294	72,302
																						115	23,729	3,828	709	2,000
																						104,200	0	111,832	9,665	35,156
																						23,000	4,200	10,263	1,000	300
																						46,200	0	79,056	3,215	7,076
																						44,424		47,572	2,106	
																						59,000	0	78,204	2,750	38,783
																						100,000	0	65,000	6,050	9,790
																						84,650	450	20,706	11,870	5,824
																						14,000	2,167	169,543	4,569	15,113
																						0	468	2,007	0	2,922
																						1,000	279	4,631	3,509	1,123
																							0	15,831	9,850	29,702
																							0	31,943	2,102	8,743
																								1,600		1,600
																								0	0	0
																								50,086	3,000	1,730
																								12,100		4,625
																								27,470	5,030	24,815
																										2,000
																										1,300
																										1,280
																										2,603

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TABLE 4.—*Summary of statistics of endowed academies,*

States and Territories.	Number of schools.	Secondary instructors.			Students.					
					Secondary.			Preparing for college classical course.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	2	3	4	5	6	7	8	9	10	11
United States	1,632	3,272	3,937	7,209	47,534	47,397	94,931	11,220	5,429	16,649
North Atlantic Division	510	1,305	1,457	2,762	18,707	15,531	34,238	5,143	1,310	6,453
South Atlantic Division	362	603	652	1,255	8,296	7,870	16,166	2,284	1,343	3,627
South Central Division	325	461	636	1,097	7,372	8,076	15,448	1,925	1,569	3,494
North Central Division	279	602	738	1,340	8,443	9,166	17,609	1,467	967	2,434
Western Division	156	301	454	755	4,716	6,754	11,470	401	240	641
North Atlantic Division:										
Maine	21	38	55	93	897	865	1,762	306	93	399
New Hampshire	26	80	48	128	1,286	725	2,011	532	37	569
Vermont	20	52	69	121	1,004	952	1,956	277	100	377
Massachusetts	72	156	211	367	2,380	2,191	4,571	792	255	1,047
Rhode Island	4	25	15	40	453	168	631	164	3	167
Connecticut	36	76	100	176	751	872	1,623	100	159	259
New York	174	448	479	927	6,221	5,481	11,702	1,678	390	2,068
New Jersey	51	143	167	310	1,812	1,195	3,007	482	67	549
Pennsylvania	106	287	313	600	3,893	3,082	6,975	812	206	1,018
South Atlantic Division:										
Delaware	5	10	12	22	106	145	251	19	1	20
Maryland	34	94	90	184	1,005	788	1,793	343	89	432
District of Columbia	16	48	49	97	426	500	926	115	10	125
Virginia	60	114	108	222	1,472	1,272	2,744	624	262	886
West Virginia	4	6	7	13	80	48	128	22	0	22
North Carolina	88	138	111	249	1,888	1,447	3,335	593	282	875
South Carolina	31	56	63	119	950	669	1,619	149	204	353
Georgia	113	122	182	304	2,135	2,625	4,760	313	410	723
Florida	11	15	30	45	234	376	610	106	85	191
South Central Division:										
Kentucky	57	62	88	150	1,161	1,346	2,507	241	230	471
Tennessee	74	105	143	248	2,038	1,702	3,740	751	406	1,157
Alabama	61	89	118	207	1,312	1,142	2,454	288	139	427
Mississippi	41	53	84	137	726	1,317	2,043	150	310	460
Louisiana	23	29	61	90	450	674	1,124	123	134	257
Texas	47	84	96	180	1,166	1,357	2,523	199	278	467
Arkansas	15	30	38	68	442	384	826	160	61	221
Indian Territory	7	9	8	17	77	154	231	23	11	34
North Central Division:										
Ohio	46	89	127	216	1,299	1,781	3,080	277	187	464
Indiana	15	19	29	48	225	374	599	42	26	68
Illinois	37	59	148	207	693	1,268	1,961	166	159	325
Michigan	11	17	25	42	263	389	652	19	6	25
Wisconsin	20	62	44	106	773	568	1,341	85	21	106
Minnesota	17	52	31	83	882	490	1,372	71	30	101
Iowa	27	63	51	114	1,093	892	1,985	123	76	199
Missouri	64	157	183	340	2,130	2,185	4,315	429	277	705
North Dakota	3	3	8	11	44	68	112	10	8	18
South Dakota	5	11	15	26	80	135	215	48	7	55
Nebraska	14	26	51	77	317	455	772	94	90	184
Kansas	20	44	26	70	644	561	1,205	103	80	183
Western Division:										
Montana	2	1	6	7	23	35	58	1	13	14
Wyoming	1	0	8	8	0	60	60	0	0	0
Colorado	7	14	32	46	78	246	324	27	51	78
New Mexico	5	9	11	20	74	59	133	6	4	10
Utah	14	30	30	60	392	312	704	107	42	149
Nevada	1	1	6	7	0	25	25	0	0	0
Idaho	1	2	4	6	27	21	48	13	12	25
Washington	11	18	22	40	151	234	485	19	18	37
Oregon	14	29	26	55	360	326	686	81	49	130
California	100	197	309	506	3,611	5,332	8,943	147	51	198

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PRIVATE SECONDARY SCHOOLS.

seminaries, and other private secondary schools, for 1889–90.

Preparing for scientific course.			Total number of graduates.	Number of volumes in library.	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds.	Gifts and benefactions.
Male.	Female.	Total.								
12	13	14	15	16	17	18	19	20	21	22
6,326	3,323	9,649	8,070	961,268	37,521,576	17,052,198	232,029	4,057,912	1,619,358	781,983
2,882	931	3,813	4,070	467,060	20,898,842	15,131,159	75,056	2,238,591	1,361,040	411,479
728	240	968	1,112	130,480	3,428,463	910,465	53,231	465,844	128,162	49,163
1,144	1,045	2,189	891	95,737	3,480,583	210,375	88,713	441,832	42,180	89,386
1,361	852	2,213	1,621	214,705	6,370,183	518,199	7,564	641,188	57,983	192,902
211	255	466	376	53,286	3,343,505	282,000	7,465	270,457	29,993	39,353
78	88	166	237	12,328	$303,700	$271,905	$3,180	$24,306	$16,285	$9,503
158	84	242	323	33,894	1,003,225	1,149,200	1,900	166,430	61,711	27,230
92	59	151	200	13,678	860,825	428,000	156	50,223	20,848	20,250
439	152	591	662	74,100	2,817,818	3,156,065	7,250	301,809	116,391	123,072
30	1	31	52	7,800	450,700	2,000	0	51,507	13,000	0
60	3	63	184	24,875	885,055	337,000	0	142,342	16,450	2,666
990	204	1,194	1,185	163,393	6,676,759	622,489	21,513	887,576	35,545	24,414
464	58	522	438	44,258	1,843,882	670,500	41,057	313,387	15,030	164,009
571	282	853	729	92,734	6,056,878	8,494,000	0	301,011	1,065,780	40,044
9	0	9	27	3,700	209,600	21,000	0	21,243	1,100	7,000
60	1	61	209	39,880	941,305	731,100	9,200	85,449	41,210	11,825
25	3	28	62	26,675	564,200	80,000	0	31,565	5,000	50
155	86	241	188	22,510	463,035	25,000	10,505	111,132	5,500	10,455
0	0	0	8	350	29,500	0	0	1,875	0	0
186	31	217	231	17,465	374,755	18,095	2,718	102,408	4,705	10,596
95	17	112	117	6,490	149,955	1,420	6,277	27,793	1,838	798
189	80	269	239	8,458	521,013	33,850	20,011	75,810	68,809	6,880
9	22	31	31	4,952	175,000	0	4,520	8,599	0	1,559
143	137	280	172	29,073	555,997	43,500	4,883	74,752	8,972	2,412
349	238	587	223	20,676	457,715	50,600	15,422	93,150	3,315	4,450
170	80	250	137	13,063	1,090,050	42,375	14,034	69,932	3,175	2,682
187	308	495	90	9,868	255,933	41,000	8,320	53,973	5,120	2,735
56	22	78	68	4,518	172,985	300	1,550	76,120	2,598	70
187	138	325	139	11,594	541,923	22,600	19,718	53,553	17,000	2,675
52	118	170	45	5,120	237,865	10,000	1,057	16,524	1,294	72,362
0	4	4	17	1,825	168,115	0	23,729	3,828	706	2,000
154	72	226	218	57,395	1,128,490	104,200	0	111,832	9,665	36,156
17	56	73	77	5,979	265,700	26,000	4,200	16,263	1,600	300
71	98	169	175	46,412	1,115,055	46,200	0	79,656	3,215	7,676
76	12	88	45	9,038	388,423	44,424	----------	47,572	2,806	----------
108	46	154	121	20,085	443,200	59,000	0	78,204	2,750	78,783
132	17	149	143	14,757	693,567	100,000	0	66,000	6,050	9,560
155	118	273	144	15,998	293,235	64,650	450	26,706	11,870	5,824
388	182	570	321	25,221	901,860	14,000	2,167	160,543	4,569	15,113
24	41	65	0	1,300	56,250	0	468	2,007	0	2,922
43	9	52	13	1,802	205,120	1,000	279	4,631	3,500	1,123
84	80	164	55	10,995	519,316	26,500	0	15,831	9,850	26,702
109	121	230	109	5,723	419,907	32,225	0	31,943	2,108	8,743
8	8	16	0	250	14,000	----------	----------	1,600	----------	1,000
0	0	0	2	200	0	0	0	0	0	0
8	30	38	4	4,400	466,650	1,000	2,500	50,086	3,000	1,730
6	13	19	15	1,150	99,300	0	400	12,100	----------	4,625
29	90	119	0	8,505	448,530	14,000	1,200	27,470	5,000	24,815
0	0	0	6	600	60,100	----------	----------	----------	----------	2,000
11	10	21	0	1,000	11,000	0	0	2,000	----------	----------
5	39	44	52	5,560	339,225	110,000	0	36,733	6,750	1,300
49	22	71	62	12,560	450,425	115,500	890	22,737	11,740	1,290
95	43	138	235	18,981	1,454,275	41,500	2,475	117,731	3,503	2,603

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TABLE 5.—*Ratio of male and female instructors and students in private secondary schools in the United States—1889-90.*

	Male.	Female.
Total number of instructors	3,272	3,937
Percentage of instructors	45.39	54.61
Total number of students	47,534	47,397
Percentage of students	50.07	49.93
Total number of students preparing for college classical course	11,220	5,429
Percentage of students preparing for college classical course	67.39	32.61
Total number of students preparing for college scientific course	6,326	3,323
Percentage of students preparing for college scientific course	65.56	34.44
Total number of students preparing for college classical and scientific course	26,298	8,752
Percentage of students preparing for college classical and scientific courses	66.72	33.28
Percentage of male and female students preparing for college, in both classical and scientific courses	63.30	36.70
Percentage of male students preparing for college, in both classical and scientific courses, to whole number of students	36.91	
Percentage of female students preparing for college, in both classical and scientific courses, to whole number of students		18.46
Percentage of both male and female students preparing for college, in both classical and scientific courses, to whole number of students	27.70	

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TABLE 6.—*Summary of certain studies pursued in endowed acade-*

States and Territories.	Latin.			Greek.			French.			German.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13
United States	17,398	12,335	29,733	5,746	921	6,667	5,837	10,367	16,174	6,776	6,094	12,870
North Atlantic Division	8,091	4,829	12,920	3,559	390	3,949	3,775	5,067	8,842	3,542	2,855	6,397
South Atlantic Division	3,757	2,254	6,011	770	132	902	964	1,689	2,653	942	621	1,563
South Central Division	2,332	2,039	4,371	443	105	548	437	1,005	1,442	496	436	932
North Central Division	2,581	2,631	5,212	871	251	1,122	444	1,607	2,051	1,587	1,631	3,218
Western Division	637	582	1,219	103	43	146	187	999	1,186	209	551	760
North Atlantic Division:												
Maine	331	239	570	173	32	205	98	140	238	17	19	36
New Hampshire	684	243	927	390	46	436	211	137	348	106	62	168
Vermont	479	305	784	152	30	182	92	129	221	37	72	109
Massachusetts	1,049	848	1,897	599	126	725	649	902	1,551	316	431	747
Rhode Island	185	46	231	55	3	58	119	85	204	26	38	64
Connecticut	321	216	540	67	14	81	89	291	380	75	144	219
New York	2,364	1,413	3,777	1,014	62	1,076	1,416	1,892	3,308	1,483	1,165	2,648
New Jersey	943	391	1,334	496	36	532	462	580	1,042	486	273	759
Pennsylvania	1,732	1,128	2,860	613	41	654	639	911	1,550	996	651	1,647
South Atlantic Division:												
Delaware	70	52	122	16	2	18	32	40	72	13	6	19
Maryland	509	227	736	71	8	79	263	297	560	415	213	628
District of Columbia	209	110	319	81	1	82	90	365	455	14	58	72
Virginia	822	412	1,234	120	3	123	232	378	610	202	139	341
West Virginia	40	10	50	19	2	21	9	9	18	15	4	19
North Carolina	861	338	1,199	186	18	204	50	90	145	77	38	115
South Carolina	418	206	624	58	7	65	177	193	370	132	71	203
Georgia	709	852	1,621	199	77	276	57	275	332	20	35	55
Florida	59	47	106	20	14	34	49	42	91	54	57	111
South Central Division:												
Kentucky	442	401	843	51	27	78	17	147	164	90	136	226
Tennessee	746	430	1,176	166	31	197	12	92	104	87	55	142
Alabama	464	444	908	65	22	87	27	138	165	37	9	46
Mississippi	140	246	386	27	7	34	11	58	69	11	15	26
Louisiana	136	58	194	51	0	51	286	448	734	49	18	67
Texas	232	320	552	42	8	50	67	74	141	177	128	305
Arkansas	161	117	278	39	9	48	15	46	61	45	72	117
Indian Territory	11	23	34	2	1	3	2	2	4	0	3	3
North Central Division:												
Ohio	448	663	1,111	205	61	266	80	445	525	290	335	625
Indiana	124	245	369	4	10	14	5	108	113	4	59	63
Illinois	316	447	763	79	49	128	46	276	322	101	276	377
Michigan	57	54	111	9	0	9	19	55	74	42	54	96
Wisconsin	378	91	469	178	3	181	139	72	211	387	161	548
Minnesota	216	117	333	72	9	81	38	110	148	107	120	227
Iowa	231	146	377	85	24	109	1	1	2	155	95	250
Missouri	518	529	1,047	153	47	200	102	394	496	367	290	657
North Dakota	14	16	30	2	0	2	0	13	13	0	1	1
South Dakota	10	20	30	2	0	2	0	27	27	4	39	43
Nebraska	89	159	248	26	14	40	0	68	68	35	88	123
Kansas	180	144	324	56	34	90	14	38	52	95	113	208
Western Division:												
Montana	3	5	8	0	0	0	0	2	2	1	12	13
Wyoming	0	20	20	0	0	0	0	5	5	0	0	0
Colorado	15	93	108	3	1	4	0	44	44	1	65	66
New Mexico	14	11	25	0	0	0	2	2	4	2	2	4
Utah	92	38	130	11	1	12	7	6	13	48	37	85
Nevada	0	15	15	0	0	0	0	0	0	0	12	12
Idaho	13	12	25	13	12	25	13	12	25	13	12	25
Washington	60	43	103	11	5	16	2	93	95	24	70	94
Oregon	130	111	241	24	7	31	28	40	68	71	81	152
California	310	234	544	41	17	58	135	795	930	49	260	309

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mies, seminaries, and other private secondary schools for 1889–90.

Algebra.			Geometry.			Physics.			Chemistry.			General History.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
19,755	15,492	35,247	10,005	6,482	16,487	8,954	8,506	17,460	4,215	3,947	8,162	12,387	15,095	27,482
8,346	4,851	13,197	4,870	2,423	7,293	3,628	2,634	6,262	1,989	1,365	3,354	4,587	5,322	9,909
3,901	2,758	6,659	1,776	1,001	2,777	1,542	1,396	2,938	622	646	1,268	3,223	2,839	6,072
3,506	3,445	6,951	1,430	1,344	2,774	1,719	1,926	3,645	653	778	1,431	2,069	2,797	4,867
3,122	3,274	6,396	1,488	1,228	2,716	1,638	1,726	3,364	771	813	1,584	1,940	2,315	4,255
880	1,164	2,044	441	486	927	427	824	1,251	180	345	525	567	1,822	2,389
404	360	764	264	179	443	213	165	378	112	117	229	259	208	467
419	203	622	329	89	418	260	86	346	157	70	227	487	111	598
389	290	659	153	107	260	158	112	270	104	73	177	243	211	454
1,264	677	1,941	734	379	1,113	421	246	667	243	200	443	424	720	1,144
142	37	179	108	22	130	43	25	68	21	16	37	220	57	277
299	217	516	144	78	222	117	123	240	55	100	155	135	241	376
2,542	1,539	4,081	1,467	918	2,385	1,077	1,024	2,101	627	445	1,072	1,929	1,941	3,870
1,180	435	1,615	580	208	788	352	191	543	240	94	334	539	402	941
1,727	1,153	2,880	1,091	443	1,534	987	662	1,649	430	250	680	1,086	696	1,782
53	41	94	28	24	52	25	18	44	10	8	18	14	10	24
604	166	770	374	80	454	260	164	424	132	54	186	503	332	835
207	180	387	103	80	183	84	102	186	31	57	88	108	306	414
799	549	1,348	509	160	669	276	258	534	136	122	258	454	565	1,019
37	16	53	22	4	26	15	4	19	4	1	5	16	35	51
722	429	1,151	216	88	304	273	191	464	68	91	159	802	341	1,143
442	288	730	172	145	317	225	165	390	64	71	135	439	276	715
931	985	1,916	317	380	697	346	452	798	145	217	362	803	844	1,647
106	104	210	35	40	75	37	42	79	33	25	57	94	130	224
550	567	1,117	258	194	452	222	256	478	116	144	260	307	403	710
815	631	1,446	310	216	526	371	343	714	142	105	247	351	479	830
689	626	1,315	248	234	482	222	272	494	130	119	249	486	509	995
356	467	823	127	172	299	294	434	728	90	127	217	237	467	704
181	220	401	94	78	172	106	175	281	60	116	176	240	418	658
656	729	1,385	328	399	727	424	397	821	77	140	217	306	415	721
243	168	411	62	46	108	73	42	115	34	26	60	108	79	187
16	37	53	3	5	8	7	7	14	4	1	5	25	27	52
385	602	987	191	181	372	207	253	460	109	149	258	257	319	576
97	170	267	29	55	84	40	118	158	25	33	58	57	120	177
260	475	735	126	191	317	220	319	539	92	186	278	114	491	605
116	118	234	33	46	79	46	77	123	28	65	93	44	121	165
285	176	461	212	92	304	173	103	276	64	30	94	331	127	458
231	155	386	122	62	184	103	55	158	61	22	83	138	118	256
385	278	663	191	112	303	153	109	262	50	40	90	214	191	405
1,006	868	1,873	397	279	676	528	480	1,008	258	184	442	582	418	1,000
10	32	42	5	11	16	6	26	32	0	6	6	2	4	6
11	50	61	6	31	37	4	8	12	2	5	7	10	57	67
119	160	279	57	94	151	67	106	173	31	49	80	76	223	299
218	190	408	119	74	193	91	72	163	51	44	95	115	126	241
5	7	12	0	1	1	0	0	0	0	0	0	1	23	24
0	20	20	0	0	0	0	0	0	0	0	0	0	60	60
11	97	108	6	49	55	4	24	28	5	15	20	1	81	82
35	26	61	19	7	26	3	10	13	3	4	7	21	26	47
123	75	198	52	27	79	53	27	80	46	16	62	109	58	167
0	18	18	0	15	15	0	0	0	0	6	6	0	25	25
11	10	21	11	10	21	11	10	21	11	10	21	24	22	46
49	80	129	22	32	54	16	38	54	10	22	32	15	150	165
171	141	312	58	46	104	76	115	191	22	38	60	79	151	230
475	690	1,165	273	299	572	264	600	864	83	234	317	317	1,226	1,543

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TABLE 7.—*Percentage of male and female students in private secondary schools pursuing certain studies.*

Note.—50.07 per cent of the whole number of students are males.

Studies.	Male.	Female.
	Per cent.	*Per cent.*
Latin	58.51	41.49
Greek	86.18	13.82
French	35.91	64.09
German	52.65	47.35
Algebra	56.05	43.95
Geometry	60.68	39.32
Physics	51.28	48.72
Chemistry	51.65	48.35
General history	45.07	54.93

TABLE 8.—*Percentage of students in each branch of study to the whole number of students.*

	Per cent.
Latin	31.32
Greek	7.02
French	17.03
German	13.55
Algebra	37.12
Geometry	17.36
Physics	18.39
Chemistry	8.59
General history	28.98

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	ALABAMA.					
1	Anniston	Noble Institute (boys)	R. H. Willis	Epis	4	0
2	....do	Noble Institute (girls)	Miss E. V. Bristow	Epis	0	8
3	Ashland	Ashland High School	Riddle & Leveritt		3	2
4	Athens	Trinity Normal School	Miss Mary F. Wells	Cong	0	5
5	Birmingham	South Highlands Academy.	Joel C. Du Bose, A. M	Nonsect	2	0
6	Brewton	Brewton Institute	Bernard Awtrey	Nonsect	1	6
7	....do	East Side Academy	H. J. Seale	0	1	1
8	Buena Vista	High School	Claude Harvey, A. B		1	2
9	Calera	High School	W. W. Wilson	0	1	1
10	Centerville	Centerville Academy	J. D. Cooper	Nonsect	1	3
11	Chance	Bethel High School	C. C. Johnston, A. B	Nonsect	1	1
12	Clanton	Clanton High School	A. J. Scott	Nonsect	4	2
13	Collinsville	Collinsville High School	A. W. Tate	Nonsect	1	3
14	Cullman	Cullman District School	Wm. M. Wood		1	2
15	Dadeville	Dadeville High School	W. A. Vogeley	Nonsect	1	2
16	Demopolis	Marengo Female Institute.	G. F. Mellen, A. M		1	8
17	....do	Marengo Military Academy.	G. M. Thomas, A. M	Nonsect	3	0
18	Fayette C. H	Male and Female Institute.	M. B. Du Bose	Nonsect	1	2
19	Flomaton	Flomaton High School	John W. Agnew	Nonsect	1	1
20	Fort Deposit	Bethel Academy	J. M. McIver	Bapt	1	2
21	Gaylesville	High School	S. L. Russell		3	3
22	Gold Hill	School House	A. G. Dowdell	Nonsect	1	0
23	Greensboro	Female College	D. P. Christenberry, president.	Nonsect	1	4
24	Greenville	South Alabama Female Institute.	Jos. M. Dill, president.	Bapt	1	4
25	Grove Hill	Grove Hill Academy	W. A. McLeod	Nonsect	1	2
26	Hamilton	High School	W. T. Mitchell		1	1
27	Harpersville	Ellen Hill Academy	S. J. Strock		1	1
28	Healing Springs	Industrial High School.	Rev. J. B. Hamberlin, A. M.	Bapt	1	1
29	Helena	High School	O. C. Hand	Nonsect	1	2
30	Hillsboro	....do	Chas. E. Mitchell	Nonsect	1	1
31	Jackson	Jackson Academy	R. L. Horris	Nonsect	1	1
32	Jasper	Male and Female Academy.	Edwin H. Foster		1	3
33	Leighton	....do	Rev. Jos. Shackelford	Nonsect	2	2
34	Lineville	Lineville Institute	E. J. Garrison	Nonsect	1	4
35	Livingston	Military School	J. W. A. Wright	Nonsect	2	0
36	Lower Peach Tree	Lower Peach Tree Academy.	W. A. George	Nonsect	1	0
37	Marion	Military Institute	James T. Murfee	Nonsect	5	0
38	Mobile	Barton Academic High School.	B. S. Woodcock		2	1
39	....do	Towle's Institute for Boys.	Amos Towle	Nonsect	2	0
40	Mulberry	Mulberry School	Miss J. A. Howard, teacher.		0	1
41	Opelika	Opelika Seminary	Rev. D. M. Banks	Nonsect	2	2
42	Perdue Hill	High School	C. H. Florey	0	1	1
43	Pratt Mines	Crumly High School	J. E. Strickland, A. B	M. E. So	1	1
44	....do	Fields' Academy	M. M. Fields		1	1
45	Prattville	Male and Female Academy.	E. Y. McMorries	Nonsect	0	3
46	Ramer	High School	B. H. Boyd	Nonsect	1	1
47	Randolph	....do	J. C. Hicks	Nonsect	1	1
48	Roanoke	Normal College	Geo. W. Stevens, president.		2	3
49	Roberts	Elim Academy	J. A. Seale	Bapt	1	0
50	Rockford	High School	C. C. Nall		2	2
51	Salitpa	Salitpa Academy	Eugene W. Coleman	Nonsect	1	1

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and other private secondary schools for 1889–90.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
30	0	10	0	9	0	.....	Yes.	No..	600	Yes.	$50,600	$5,000	0	$1,800	$425	1
0	100	.....	.....	.....	.....	3	No..	Yes.	100	Yes.	100,000	0	0	4,000	.....	2
40	35	4	3	30	20	6	No..	No..	0	Yes.	2,040	0	$325	1,200	.....	3
12	28	4	8	0	0	0	Yes.	No..	500	Yes.	10,000	0	0	636	1,957	4
35	0	17	0	15	0	0	No..	No..	300	Yes.	5,025	0	35	1,965	0	5
20	31	8	12	.....	.....	0	No..	No.	100	Yes.	8,000	.....	252	2,500	0	6
15	12	0	0	0	0	0	No.	No..	0	Yes.	1,000	.....	150	750	.....	7
50	18	2	3	1	0	5	No.	No..	.....	.....	2,500	.....	0	1,500	.....	8
6	4	6	4	.....	.....	.....	No..	No..	.....	Yes.	500	0	210	600	.....	9
42	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	110	.....	.....	10
5	4	1	0	.....	.....	.....	No..	No..	.....	Yes.	650	0	150	400	.....	11
37	24	19	12	13	7	.....	No..	No..	1,000	Yes.	9,800	7,000	200	.....	1,475	12
8	10	3	5	2	.....	.....	No..	No..	0	Yes.	3,500	0	.....	.....	0	13
22	11	3	0	0	0	0	No.	No..	0	Yes.	1,317	.....	1,000	400	.....	14
12	13	2	3	0	0	7	No..	No..	0	Yes.	4,149	0	225	1,530	0	15
0	50	0	0	0	0	5	Yes.	No..	1,500	Yes.	10,500	0	0	.....	0	16
60	0	16	0	0	0	0	No..	No..	20	Yes.	8,000	.....	0	3,500	300	17
22	15	6	2	0	0	6	No..	No..	0	Yes.	3,000	0	125	1,150	0	18
7	3	0	0	0	0	3	No..	Yes.	0	Yes.	530	0	70	.....	.....	19
10	15	0	0	0	0	0	No.	.....	.....	Yes.	1,550	0	0	1,230	0	20
16	15	11	0	0	0	2	No..	No..	0	Yes.	5,100	.....	202	600	.....	21
1	3	0	0	0	0	0	No..	No..	0	Yes.	200	0	60	.....	0	22
0	42	.....	.....	.....	.....	2	No..	No..	.....	Yes.	4,000	.....	.....	4,216	0	23
0	51	0	0	0	0	2	No..	No..	0	Yes.	3,000	0	0	2,000	0	24
24	20	5	3	4	3	6	No..	No..	0	Yes.	1,000	0	0	1,400	.....	25
15	4	6	3	4	2	0	No..	.....	.....	Yes.	300	.....	75	400	.....	26
15	12	2	0	0	0	0	No..	No..	.....	Yes.	1,200	.....	.....	.....	.....	27
7	9	0	0	20	26	0	No..	No..	.....	Yes.	2,000	0	0	382	0	28
11	10	.....	.....	.....	.....	0	No..	No..	.....	Yes.	700	0	300	500	200	29
9	5	0	0	0	0	.....	No..	No..	.....	Yes.	500	0	170	700	.....	30
7	3	0	0	0	0	0	No..	No..	0	Yes.	1,800	.....	.....	900	.....	31
17	20	.....	.....	.....	.....	.....	No..	No..	200	Yes.	2,000	.....	100	1,900	.....	32
15	17	2	0	.....	.....	0	No..	No..	0	.....	1,500	0	210	.....	.....	33
30	20	.....	.....	.....	.....	0	No..	No..	.....	Yes.	3,000	.....	259	.....	.....	34
30	0	6	0	.....	.....	0	No..	Yes.	400	Yes.	2,600	0	.....	.....	.....	35
9	10	3	9	0	0	0	No..	No..	0	Yes.	800	0	178	800	0	36
40	0	40	0	.....	.....	2	No..	No..	1,000	Yes.	61,000	0	0	7,200	0.	37
88	0	0	0	.....	.....	9	No..	No..	200	No..	72,000	.....	.....	.....	.....	38
52	0	13	0	17	0	5	Yes.	No..	.....	No..	12,000	.....	.....	3,400	.....	39
3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65	.....	.....	40
0	70	.....	.....	.....	.....	4	No..	No..	0	Yes.	3,000	0	0	2,500	.....	41
6	8	1	2	.....	.....	0	No..	No..	152	.....	1,000	.....	78	736	.....	42
10	12	4	7	2	5	3	.....	.....	.....	Yes.	500	175	0	600	.....	43
22	25	.....	.....	.....	.....	.....	Yes.	.....	.....	Yes.	1,200	.....	420	900	.....	44
20	24	12	14	0	0	10	No..	Yes.	300	Yes.	20,500	0	500	1,400	.....	45
15	15	.....	.....	.....	.....	0	No..	No..	0	Yes.	1,200	0	)	50	.....	46
10	8	.....	.....	.....	.....	.....	.....	No..	0	Yes.	600	200	.....	.....	.....	47
120	130	.....	.....	.....	.....	1	No..	No..	.....	.....	10,000	.....	300	3,000	.....	48
0	8	0	2	.....	.....	.....	No..	No..	.....	Yes.	.....	.....	250	.....	.....	49
29	25	.....	.....	.....	.....	.....	No.	No..	.....	Yes.	1,525	.....	400	.....	.....	50
10	7	2	1	10	4	.....	No..	No..	500	Yes.	825	.....	200	300	.....	51

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TABLE 5.—Statistics of endowed academies, seminaries,

	State and post-office	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	ALABAMA—[illegible]					
59	[illegible]	[illegible]	R. E. [illegible]		2	12
60	[illegible]	[illegible]	W. K. [illegible]		2	2
61	[illegible]	[illegible]	Rev. A. F. [illegible], Ph.D.	Cong	1	1
62	[illegible]	[illegible]	A. A. M[illegible]	Nonsect	1	0
63	[illegible]	[illegible]	W. H. [illegible]		3	0
64	[illegible]	[illegible]	Wm. D. [illegible]		4	0
65	[illegible]	[illegible]	J. A. J. [illegible]		1	1
66	[illegible]	[illegible]	W. K. [illegible]		2	2
67	[illegible]	[illegible]	J. [illegible]		1	1
68	Wilsonville	High School	C. J. Garrett		1	1
	ARKANSAS.					
62	Arkadelphia	Ouachita Baptist College	John W. Conger, A. M., president	Bapt	4	14
63	Barren Fork	Mount Pleasant Academy	L. K. Hooper		2	0
64	Beansboro	Cane Hill College	F. R. Earle		1	1
65	Canton	Male and Female Academy.	D. L. Petty		1	1
66	Conway	Hendrix College	A. E. Millar, president	M. E. So	8	0
67	Fort Smith	Convent of Mercy	Mother Mary Cecelia	R. C	0	1
68	Holly Grove	Holly Grove Institute	L. S. Abbott		1	0
69	Little Rock	Arkansas Female College.	Myra C. Warner		2	5
70	Monticello	University School	J. H. Hinemon		2	1
71	Prairie Grove	Prairie Grove Institute	J. E. Hopkins	Meth	2	2
72	Quitman	Male and Female College.	Owen H. Tucker, president	M. E. So	2	3
73	Rogers	Rogers Academy	J. W. Scroggs	Cong	2	4
74	Shoal Creek	St. Scholastica's Academy.	Ven. Mother Superior	R. C	0	3
75	Spadersville	St. Benedict's College	Rev. W. Schlumpf, O. S. B.	R. C	2	0
76	Stuttgart	Classical Institute	Rev. Geo. C. Jones, A. M.	M. E. So	1	3
	CALIFORNIA.					
77	Alameda	Notre Dame Academy	Sister Francis	R. C	0	7
78	Auburn	Sierra Normal College	M. W. Ward, president	Nonsect	2	3
79	Belmont	Belmont School	Wm. T. Reid	Nonsect	7	3
80	Berkeley	Perkeley Gymnasium	George Bates	Nonsect	14	2
81	do	Boone's University School.	Philip S. Boone	Nonsect	3	0
82	do	Bowen's Academy	Thomas S. Bowens, A. B	Nonsect	3	3
83	do	Miss Heads Seminary	Miss Anna Head	Nonsect	0	7
84	do	St. Joseph's Academy		R. C	0	6
85	Bishop	Inyo Academy	W. G. Dixon	M. E	1	2
86	Chico	Chico Academy	Rev. J. M. Wooodman	Nonsect	1	2
87	East Oakland	Our Lady of Lourde's Academy.	Sisters of Mercy (title of reporting officer).	R. C	0	1
88	Florida	Academy and Business College.	N. S. Phelphs	Nonsect	3	2
89	do	St. Joseph's Institute	Sisters of Mercy	R. C	0	8
90	Healdsburg	Healdsburg College	Wm. C. Grainger	7 Day Adventist.	6	5
91	Irvington	Washington College	J. Durham	Christian	7	3
92	Lakeport	Lakeport Academy	John Overholser	Nonsect	1	1
93	Livermore	Livermore College	J. D. Smith	Nonsect	4	3
94	Lower Lake	Indian Day School	P. Stanislaus (Rev)	R. C	0	1
95	Marysville	College of Notre Dame	Sister Marie Alénie	R. C	0	4
96	Mason	St. Hilda's School	Rev. John D. Easter, D. D., rector.	P. E	3	7
97	Merced	Merced Academy	Rev. Albert McCalla	Nonsect	2	2
98	Napa City	Oak Mound School	F. O. Mower	Nonsect	2	1

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and other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
20	51	....	....	....	....	14	No..	No..	565	Yes.	$20,200	.....	$6,475	$2,810	.....	52
60	32	....	....	....	....	....	No..	No..	200	Yes.	2,025	.....	280	2,000	.....	53
19	14	6	4	0	0	4	Yes.	No..	3,500	Yes.	100,200	$80,000	0	1,440	$6,283	54
3	1	....	....	....	....	0	No..	No..	0	Yes.	600	0	192	410	.....	55
40	0	30	0	10	0	....	No..	No..	500	Yes.	15,500	0	0	500	0	56
36	0	12	0	24	0	....	No..	No..	426	Yes.	10,000	.....	0	2,000	.....	57
10	12	2	5	....	....	0	Yes.	No..	0	Yes.	750	.....	125	200	.....	58
30	20	10	8	5	10	9	No..	No..	0	Yes.	500	.....	200	2,000	.....	59
10	16	10	16	0	0	1	.....	.....	1,000	Yes.	1,000	.....	204	877	.....	60
20	10	10	13	4	3	1	Yes.	No..	0	Yes.	973	.....	30	650	.....	61
80	75	60	30	40	25	9	No..	No..	1,500	Yes.	50,150	0	0	5,000	1,500	62
32	6	....	....	....	....	0	No..	No..	0	Yes.	1,000	.....	.....	1,250	.....	63
7	4	....	....	....	....	....	No..	No..	.....	Yes.	8,000	.....	.....	.....	.....	64
20	20	10	8	....	....	10	No..	Yes.	100	Yes.	2,525	.....	0	300	.....	65
95	21	75	10	0	0	2	No..	No..	1,000	Yes.	45,250	10,000	0	3,032	55,000	66
0	2	....	....	....	....	....	Yes.	No..	100	Yes.	75,000	0	0	.....	.....	67
11	13	0	0	....	....	0	No..	No..	0	Yes.	2,040	.....	0	1,200	.....	68
0	96	0	3	0	93	5	No..	No..	800	Yes.	10,000	.....	.....	.....	.....	69
25	23	....	....	....	....	5	No..	No..	200	.....	7,500	.....	.....	.....	.....	70
61	31	12	10	....	....	10	No..	No..	50	Yes.	4,000	0	0	1,750	.....	71
45	42	....	....	....	....	1	No..	No..	550	Yes.	15,200	.....	1,057	1,057	1,456	72
20	14	....	....	....	....	3	Yes.	No..	650	Yes.	100	0	0	1,604	2,200	73
0	16	....	....	....	....	....	No..	No..	50	.....	7,000	.....	.....	.....	.....	74
15	0	3	0	12	0	0	Yes.	No..	80	.....	100	.....	.....	.....	.....	75
31	21	0	0	....	....	0	No..	No..	40	.....	10,000	.....	0	1,331	.....	76
0	100	....	....	....	....	....	Yes.	.....	300	Yes.	11,600	.....	0	1,900	0	77
44	30	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	78
51	1	24	1	10	0	7	No..	Yes.	900	Yes.	50,300	0	0	19,500	0	79
75	7	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	80
0	40	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	81
25	1	11	3	9	0	8	No..	No..	0	Yes.	12,000	.....	.....	.....	.....	82
9	20	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	83
4	10	0	0	0	0	....	Yes.	No..	0	Yes.	50,100	.....	.....	.....	.....	84
14	16	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	85
7	6	1	0	0	0	....	No..	No..	500	Yes.	10,000	.....	.....	.....	.....	86
0	4	0	0	0	0	0	Yes.	No..	300	Yes.	.....	.....	.....	.....	.....	87
10	15	1	0	6	4	31	Yes.	Yes.	1,000	Yes.	30,400	.....	.....	.....	.....	88
6	40	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	89
29	20	4	0	12	9	3	Yes.	.....	500	Yes.	51,000	11,500	.....	3,316	890	90
67	52	....	....	....	....	27	.....	Yes.	300	Yes.	40,000	.....	.....	.....	.....	91
32	33	3	2	4	3	6	No..	No..	400	No..	300	0	.....	960	0	92
20	11	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	93
12	6	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	94
0	12	0	0	....	....	1	No..	No..	1,200	Yes.	30,095	0	.....	.....	195	95
0	28	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	96
18	16	1	0	2	0	0	Yes.	No..	10	Yes.	13,000	.....	.....	.....	1,013	97
36	0	5	0	....	....	4	No..	No..	200	Yes.	8,250	.....	.....	2,500	.....	98

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	CALIFORNIA—con'd.					
99	Oakland	Miss S. B. Brisbee's School.	Miss S. B. Brisbee	Nonsect	2	3
100	....do	Convent of Our Lady of the Sacred Heart.	Mother Elizabeth	R. C	0	3
101	....do	Field Seminary	Mrs. W. B. Hyde	Nonsect	1	1
102	....do	Gibson's Normal Training School.	J. C. Gibson	Nonsect	1	0
103	....do	Hopkins Academy	W. W. Anderson	Cong	4	3
104	....do	Miss Horton's School	Sarah W. Horton	Nonsect	1	7
105	....do	Saint Francis De Sales School (boys).	Brother Vivian	R. C		
106	....do	Saint Francis De Sales School (girls).	Sister M. Celestine	R. C	0	2
107	....do	Saint Joseph's (boys)	Brother Sabinian	R. C		
108	....do	St. Joseph's (girls)	Sister Mary	R. C		
109	....do	Saint Joseph's Institute (boys).	Brother Lascian	R. C		
110	....do	St. Mary's	Brother Leonard	R. C		
111	....do	Snell Seminary	Miss Mary E. Snell. Richard B. Snell.	Nonsect	5	8
112	Orland	Orland Normal	Wm. Henslee	Nonsect	1	0
113	Pasadena	Classical School for Boys.	S. C. Clark	Nonsect	2	2
114	Placerville	Placerville Aademy	Miss Lizzie H. Tindall	Nonsect	0	3
115	Petaluma	St. Vincent's Academy	Sister M. Gonzaga	R. C	0	7
116	Pomona	Pomona College	E. C. Norton	Con	3	3
117	....do	Pomona Private School.	Cora T. Whitson	Nonsect	0	1
118	Redlands	Bellevue Academy	Horace A. Brown, LL. B.	0	2	1
119	Redwood City	Academy of Notre Dame.	Sister Louise de Gonzague.	R. C	0	5
120	Rio Vista	St. Gertrude's Academy.	Sister M. Camillus McGone.	R. C	0	10
121	Sacramento	Howe's High School and Normal Institute.	Edward P. Howe	Nonsect	2	0
122	....do	Sacramento Institute (K street).	Brother Bosonis	R. C	10	0
123	....do	Academy and Business College.	D. B. Sturges	Nonsect	0	1
124	San Bernardino	St. Catherine's Academy.	Sister Carmen Dive	R. C	2	6
125	San Diego	Southwest Institute	Miss Emma F. Way, Miss Mary F. Kinney.		1	9
126	San Francisco	College of Notre Dame of San Francisco.	Sister Aloyse of the Cross, superioress.	R. C	0	20
127	....do	Irving Institute	Rev. Ed. B. Church	P. E	5	14
128	....do	Miss Lake's School for Girls.	Miss Mary Lake	Epis	5	15
129	....do	Presentation Convent	Sister Josephine	R. C		
130	....do	Sacred Heart College	Brother Genebern	R. C	20	0
131	....do	Sacred Heart Convent	Madame O'Mera	R. C		
132	....do	Sacred Heart Presentation Convent.	Mother M. T. Augustine.	R. C	0	11
133	....do	St. Bendom's School	Sister Emanuel	R. C		
134	....do	St. Bridget School	Sister Maurice	R. C		
135	....do	St. Francis (boys')	Miss M. Latham	R. C		
136	....do	St. Frances (girls')	Sister Aloyse	R. C		
137	....do	St. Joseph's (girls')	Sister Angela	R. C		
138	....do	St. Patrick	Sister Frederica	R. C		
139	....do	St. Peters, Christian Brothers (boys).	Brother Euphrasius	R. C		
140	....do	St. Peters (girls)	Sister Lorenza	R. C		

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	40	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	99
0	25	....	....	....	....	10	No..	No..	1,350	Yes.	$500,250	.....	.....	.....	.....	100
0	50	0	4	....	....	5	No..	Yes.	1,000	Yes.	45,000	.....	.....	$7,000	.....	101
6	13	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	102
56	0	....	....	....	....	....	.....	.....	.....	Yes.	75,000	$30,000	.....	5,500	$1,800	103
28	58	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	104
142	0	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	105
0	40	....	....	....	....	....	.....	....	.....	Yes.	.....	.....	.....	.....	.....	106
65	0	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	107
0	350	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	108
350	0	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	109
95	0	....	....	....	....	....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	110
0	130	0	0	....	....	16	No..	Yes.	250	No..	40,200	0	.....	9,000	.....	111
12	15	....	....	....	....	....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	112
16	0	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	113
3	8	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	114
40	111	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	115
42	30	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	116
10	5	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	117
12	11	6	1	....	....	2	Yes.	No..	100	Yes.	70	.....	$500	2,375	500	118
14	86	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	119
45	72	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	120
20	0	1	0	....	....	....	Yes.	No..	250	Yes.	0	.....	0	.....	.....	121
44	0	4	0	13	0	2	No..	No..	.....	Yes.	27,000	.....	.....	3,800	.....	122
48	15	14	12	8	0	5	No..	Yes.	50	No..	7,000	.....	.....	3,585	.....	123
60	45	0	10	....	....	....	No..	Yes.	300	Yes.	.....	.....	.....	.....	.....	124
2	25	....	....	....	....	3	No..	No..	100	Yes.	18,000	.....	.....	.....	.....	125
0	200	0	10	0	20	7	Yes.	.....	1,200	Yes.	.....	.....	.....	.....	.....	126
0	76	0	0	....	....	16	Yes.	Yes.	1,000	Yes.	$45,400	0	0	15,000	0	127
0	160	0	1	0	0	8	No..	Yes.	1,000	Yes.	75,100	0	0	.....	0	128
10	68	....	....	....	....	....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	129
250	0	25	0	....	....	20	No..	No..	2,500	Yes.	$100,250	.....	0	8,000	.....	130
0	110	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	131
0	80	....	....	....	....	....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	132
0	379	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	133
0	50	....	....	....	....	....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	134
140	0	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	135
0	212	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	136
0	5	....	....	....	....	....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	137
347	0	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	138
29	0	....	....	....	....	....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	139
0	400	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	140

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	CALIFORNIA—con'd.					
141	San Francisco	St. Rose's (boys)	Sister Philomena	R. C		
142	....do	St. Rose's (girls)	Sister Clara	R. C		
143	....do	St. Vincent's	Sister M. Vincent	R. C		
144	....do	Trinity School	Rev. E. B. Spalding	0	7	0
145	....do	Urban School	Nathan W. Moore	0	4	1
146	....do	Van Ness Young Ladies' Seminary.	Rev. S. H. Willey, D. D.	Nonsect	0	2
147	....do	Westminster School	James Matthews	Presb	1	2
148	....do	Miss West's School for Girls.	Miss Mary B. West		2	13
149	San Jose	St. Aloysius	Sister Ignatia	R. C		
150	....do	St. Joseph's College (boys).	Brother Colzia, S. J	R. C	4	0
151	....do	St. Joseph's College (girls).	Brother Colzia, S. J	R. C	5	0
152	....do	San Jose Institute	Miss F. P. McGehee	Epis		2
153	San Leandro	St. Mary's Convent	Sister Malicia	R. C	0	5
154	San Mateo	Laurel Hall	John Gamble	Presb	6	0
155	....do	St. Matthew's Hall	Rev. Alfred Lee Brewer, M. A.	Epis	11	2
156	San Rafael	Bates's Boys' School	O. I. Bates	Nonsect	3	0
157	....do	San Rafael Institute	Miss E. L. Murison	Nonsect	1	5
158	Santa Clara	Our Lady of Angels	Sister M. Beatrix	R. C	0	11
159	Santa Cruz	School of the Holy Cross.	Sister Marie	R. C	0	8
160	....do	Young Ladies' Seminary.	Prof. P. Pioda	Nonsect	1	2
161	Santa Paula	Santa Paula Academy	F. E. Perham		2	3
162	Santa Rosa	Boys' School	S. M. Dodge	Nonsect	3	2
163	....do	Business College	M. E. Rigby	Nonsect	2	1
164	....do	Santa Rosa Seminary	Miss Martha E. Chase	Presb	2	4
165	....do	Ursuline Academy	Sister Agatha, superior.	R. C	0	14
166	Stockton	St. Agnes's Academy	Sister M. Evangelista	R. C		
167	....do	St. Joseph's	Sister M. Raphael	R. C		
168	....do	St. Mary's College	Rev. W. B. O'Connor	R. C	5	0
169	....do	Stockton Business College.	W. C. Ramsey	Nonsect	10	3
170	Temescal	St. Lawrence (boys)	Brother Hugh	R. C		
171	....do	St. Lawrence (girls)	Sister M. Leo	R. C		
172	Ukiah	Convent Sisters of Mercy.	Sister Josephine	R. C	0	1
173	Vacaville	Vacaville Academy	Rev. H. E. Jewett	Cong	1	1
174	Vallejo	The Irma	Rev. John M. Chase	Nonsect	0	7
175	....do	St. Vincent's Convent School.	Sister M. A. Cahill	R. C	1	3
176	Woodland	St. Mary's Academy	Mother Mary Lucretia, superior.	R. C	0	9
	COLORADO.					
177	Antonito	Huntington Seminary	Miss M. S. Brengle	Presb	0	2
178	Denver	Jarvis Hall, Military Academy.	Rev. W. C. Bradshaw, M. A.	Epis	5	1
179	....do	Wolf Hall	Miss Frances W. Buchan.	Epis	3	15
180	Longmont	Longmont Academy	Rev. G. T. Crissman, D. D.	Presb	2	1
181	Pueblo	Collegiate Institute	Nelson B. Henry	M. E. So	2	3
182	Trinidad	St. Joseph Academy	Sisters of Charity	R. C	0	9
183	....do	Tillotson Academy	Fred B. Peck	Cong	2	1
	CONNECTICUT.					
184	Baltic	Academy of the Holy Family.	Sister M. Carine	R. C	0	4

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and other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
507	0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	141
0	192	----	----	----	----	----	----	----	----	----	----	----	----	----	----	142
----	537	----	----	----	----	----	----	----	----	----	----	----	----	----	----	143
35	0	0	0	0	0	9	No..	Yes.	100	Yes.	----	----	----	----	----	144
51	0	21	0	11	0	6	No..	No..	175	Yes.	$30,750	0	0	$12,000	0	145
0	42	----	----	----	----	----	Yes.	Yes.	----	----	----	----	----	----	----	146
9	3	1	1	----	----	----	No..	Yes.	----	Yes.	25,150	0	----	----	0	147
0	63	0	3	----	----	2	No..	Yes.	200	Yes.	35,200	0	0	14,345	0	148
0	140	----	----	----	----	----	----	----	----	----	----	----	----	----	----	149
170	0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	150
0	170	----	----	----	----	----	----	----	----	----	----	----	----	----	----	151
0	18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	152
38	118	----	----	----	----	----	----	----	----	----	----	----	----	----	----	153
30	0	15	0	15	0	12	No..	Yes.	250	Yes.	43,000	----	----	----	----	154
40	0	9	0	2	0	12	No..	Yes.	300	Yes.	200	0	0	----	0	155
36	0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	156
0	8	0	2	----	----	2	No..	Yes.	250	Yes.	----	0	0	----	0	157
0	163	----	----	----	----	----	----	----	----	Yes.	----	----	----	----	----	158
0	11	----	----	----	----	2	No..	----	----	Yes.	23,000	----	$1,975	----	$1,708	159
0	30	0	0	0	0	2	No..	No..	1,000	Yes.	8,000	0	0	1,950	0	160
13	12	1	1	3	7	0	No..	No..	31	Yes.	17,350	----	----	1,600	----	161
45	0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	162
33	25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	163
0	15	0	0	0	0	3	Yes.	No..	1,000	Yes.	8,100	0	----	2,200	0	164
0	29	----	----	----	----	1	No..	No..	300	Yes.	8,000	0	0	0	0	165
0	31	----	----	----	----	----	----	----	----	Yes.	----	----	----	----	----	166
0	66	----	----	----	----	1	----	----	----	----	----	----	----	----	----	167
25	0	----	----	----	----	----	Yes.	No..	645	Yes.	200	0	0	1,200	0	168
75	75	----	----	----	----	----	----	----	----	----	----	----	----	----	----	169
149	0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	170
0	14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	171
0	20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	172
15	18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	173
0	20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	174
0	25	0	0	----	----	2	No..	Yes.	0	Yes.	15,000	0	0	2,000	----	175
0	150	----	----	----	----	----	----	----	----	----	----	----	----	----	----	176
2	3	2	1	0	0	----	No..	No..	0	Yes.	----	----	----	----	----	177
40	----	15	----	----	----	0	No..	Yes.	500	Yes.	100,000	----	0	18,206	----	178
0	150	0	50	0	30	4	No..	Yes.	3,000	Yes.	300,500	----	----	30,000	----	179
14	15	9	0	----	----	----	----	----	----	Yes.	----	----	----	----	3,000	180
10	15	----	----	----	----	0	Yes.	No..	200	Yes.	50,000	$1,000	0	900	1,700	181
0	40	----	----	----	----	0	Yes.	Yes.	200	Yes.	----	----	----	----	----	182
12	23	1	0	8	0	0	No..	No..	500	No..	16,150	----	2,500	960	30	183
0	45	0	0	----	----	7	Yes.	No..	3,000	Yes.	----	----	----	----	----	184

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	CONNECTICUT—continued.					
185	Black Hall	Black Hall School	Charles G. Bartlett (per B.).	Non-sect	2	2
186	Bridgeport	Golden Hill Seminary for Young Ladies.	Miss Emily Nelson		0	6
187	do	Hillside Seminary	Miss A. T. Stone	Non-sect	0	4
188	do	Park Avenue Institute	Seth B. Jones		2	2
189	Brookfield Center	Curtis School for Boys	Frederick S. Curtis	Non-sect	1	1
190	Cheshire	Episcopal Academy of Connecticut.	Rev. Sanford J. Horton, D. D.	Epis	7	0
191	Colchester	Bacon Academy	James R. Tucker		1	1
192	Cornwall	Housatonic Valley Institute.	Mrs. C. H. Guion	Non-sect	0	4
193	Darien	Elmwood School	Myra T. Davis	Non-sect	2	2
194	Fairfield	Fairfield Academy	Francis H. Brewer	Non-sect	1	1
195	Farmington	Miss Porter's and Mrs. Dow's School.	Miss Sarah Porter and Mrs. M. E. Dow.	Non-sect	5	13
196	Lyme	The Griswold School	Mrs. R. Griswold		0	2
197	Milford	Elmwood School for Boys.	Frank M. Howe		1	1
198	Mystic	Mystic Valley English and Classical Institute.	Jno. K. Bucklyn, A. M. LL. D.	0	1	1
199	New Canaan	New Cannaan Institute.	Mrs. E. F. Ayres	Christian	1	2
200	New Haven	Elderage School (135 Sherman avenue).	Misses Bangs	Metho	1	1
201	do	Miss Johnstone's School (97 Whitney avenue).	Miss Mary S. Johnson	0	1	4
202	do	Misses Orton and Nichols School (57 Elm street).	Miss Rebecca Orton		0	8
203	do	West End Institute (99 Howe street).	Mrs. Sarah L. Cady	Cong	2	2
204	New London	Bulkeley School	Walter A. Towne	Non-sect	3	0
205	New Preston	Upson Seminary	Rev. Henry Upson	Cong	3	0
206	Norfolk	The Robbins School	Howard W. Carter, A. M.	Non-sect	2	1
207	Norwalk	Miss Baird's Institute	Miss N. F. Baird	Epis	2	2
208	Norwich	Free Academy	Robert P. Keep	Non-sect	8	8
209	Simsbury	McLean Seminary	John B. McLean	Non-sect	1	7
210	Southport	Seaside Seminary	Augusta A. Smith	Non-sect	4	3
211	Stamford	School for Boys	Hiram U. King	0	8	0
212	Sufficield	Connecticut Literary Institution.	W. Scott	Bapt	7	4
213	Washington	The "Gunnery"	J. C. Brinsmade	0	3	4
214	Waterbury	St. Margaret's Diocesan School for Girls.	Rev. Francis T. Russell, Rector.	P. E	1	5
215	Westport	Staples High School	Henry S. Pratt, A. M		1	3
216	Wilton	Wilton Academy	Edward Olmstead	Cong	1	0
217	do	Wilton Boarding Academy.	Augustus Whitlock	Non-sect	2	0
218	Woodbury	Parker Academy	Edgar H. Grout		1	1
219	Woodstock	Woodstock Academy	E. R. Hall	0	1	1
	DELAWARE.					
220	Dover	Wilmington Conference Academy.	W. L. Gooding	Meth	5	3
221	Milford	Milford Classical Academy.	Alfred C. Arnold	Nonsect	1	2
222	Newark	Academy of Newark and Delaware Normal School.	Albert N. Raub, PH. D	Nonsect	1	1
223	Wilmington	Academy of the Visitation.	Mother M. Baptista Mack.	R. C	0	4
224	do	The Friends School	Isaac T. Johnson	Friends	3	2

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and other private secondary schools for 1889 90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
20	0	10	0	4	0	1	No..	No..	800	No..	$10,200	0	0	$10,000	.....	185
0	40	.....	.....	.....	.....	.....	No.	No.	.....	Yes.	50,000	.....	.....	.....	.....	186
0	24	0	2	.....	.....	2	Yes.	No.	700	Yes.	25,000	0	0	6,000	0	187
30	0	6	0	4	0	10	No..	.....	800	Yes.	23,000	0	0	6,000	0	188
8	1	.....	.....	.....	.....	.....	Yes.	No.	400	No.	.....	.....	.....	.....	.....	189
75	0	7	0	17	0	20	Yes.	Yes.	1,000	No..	9,000	0	0	3,500	.....	190
24	20	3	1	1	0	6	No..	No..	400	No..	5,200	$32,000	0	42	$1,750	191
10	15	3	4	1	0	.....	No..	Yes.	.....	Yes.	15,000	.....	.....	1,000	.....	192
18	13	2	2	.....	.....	2	No..	No.	.....	Yes.	8,500	.....	.....	500	.....	193
20	8	2	1	3	0	0	No..	No..	.....	Yes.	1,505	0	0	1,500	.....	194
0	115	.....	.....	.....	.....	40	No..	Yes.	3,000	No..	46,000	0	0	75,000	.....	195
0	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	196
32	0	6	0	.....	.....	18	.....	Yes.	800	.....	25,000	.....	.....	.....	.....	197
39	21	12	8	1	0	2	No.	Yes.	600	No..	10,300	0	0	500	0	198
2	9	0	3	2	2	.....	Yes.	No..	.....	Yes.	8,000	0	0	750	0	199
0	9	.....	.....	.....	.....	.....	No..	.....	600	Yes.	28,000	.....	.....	.....	.....	200
0	21	0	19	0	1	.....	No..	No..	.....	No..	50	.....	.....	.....	.....	201
0	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	202
0	40	0	2	.....	.....	.....	Yes.	No.	.....	Yes.	16,000	.....	.....	.....	.....	203
58	0	3	0	2	0	10	No..	No..	100	No..	75,000	65,000	0	0	4,000	204
10	8	3	0	1	0	3	No..	Yes.	250	.....	.....	.....	.....	.....	.....	205
20	13	5	1	2	0	9	No..	No..	50	No..	5,200	0	0	1,450	600	206
0	30	.....	.....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	.....	.....	.....	207
112	119	.....	.....	.....	.....	40	Yes.	Yes.	7,000	No..	153,000	200,000	0	4,500	10,000	209
2	54	2	4	.....	.....	.....	No..	Yes.	1,000	Yes.	29,500	0	0	2,500	.....	210
5	38	.....	.....	.....	.....	.....	Yes.	.....	200	Yes.	7,000	.....	.....	.....	.....	211
60	0	45	0	20	0	3	Yes.	Yes.	200	Yes.	25,000	0	.....	.....	.....	212
75	50	.....	.....	.....	.....	5	Yes.	Yes.	1,000	No..	160,000	40,000	0	0	0	213
45	12	.....	.....	.....	.....	.....	No..	Yes.	.....	.....	.....	.....	0	.....	.....	214
0	50	.....	.....	.....	.....	5	No..	No..	500	Yes.	75,700	0	0	25,700	.....	215
20	20	0	0	1	0	0	No..	No..	1,300	Yes.	25,300	0	0	1,200	.....	216
16	4	5	4	1	0	.....	No..	No..	0	Yes.	.....	.....	.....	.....	.....	217
20	0	0	0	.....	.....	.....	No..	.....	.....	Yes.	1,000	.....	.....	.....	.....	218
10	8	5	7	.....	.....	.....	No..	No..	75	No..	2,000	0	0	1,600	0	219
20	13	1	1	.....	.....	1	No..	No..	500	No..	25,000	.....	0	600	2,700	
46	18	8	0	4	0	9	Yes.	No..	1,800	Yes.	60,100	0	0	4,000	5,000	220
9	10	.....	.....	.....	.....	8	No..	No..	0	Yes.	21,000	.....	.....	1,900	.....	221
16	20	5	0	3	0	8	No..	Yes.	700	Yes.	1,500	6,000	0	2,343	300	222
0	60	.....	.....	.....	0	.....	.....	.....	1,000	.....	75,000	.....	.....	.....	.....	223
35	37	5	1	2	.....	2	Yes.	Yes.	200	Yes.	52,000	15,000	0	13,000	2,800	224

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	DISTRICT OF COLUMBIA.					
225	Georgetown	The Linthicum Institute.	E. B. Hay		2	0
226	Washington	Academy of Holy Cross.	Sister Mary Angelica.	R. C	0	7
227	do	Academy of the Visitation.	Mother M. Augustine Dyer.	R. C	0	2
228	do	Arlington Academy (621 Seventh st. NW.).	Burton Macafee, A. M., M. D.		3	0
229	do	Columbian College Preparatory School (1335 H st. NW.).	A. P. Montague, PH.D.	Bapt	10	0
230	do	Emerson Institute	Chas. B. Young	Nonsect	6	0
231	do	Friends Select School (1811 I st. NW.).	Thos. W. Sidwell	Friends	2	7
232	do	Gonzaga College	Rev. Edward A. McGurk, S. J.	R. C	3	0
233	do	Hunt's Preparatory School (717 Irving st.).	John Wm. Hunt	Nonsect	1	0
234	do	The McDonald-Ellis School.	Miss Anna Ellis	Nonsect	4	16
235	do	Mt. Vernon Seminary (1100 M st. NW.).	Mrs. Elizabeth J. Somers, A. M.	Nonsect	1	7
236	do	Norwood Institute (1407 Massachusetts avenue.	Mr. and Mrs. Wm. D. Cabell.	Nonsect	6	6
237	do	Rittenhouse Academy, (521 Third st. NW.).	O. C. Wight	Nonsect	1	0
238	do	St. Cecilia's Academy (601 E. Capitol st.).	Sister M. Aquina	R. C	0	2
239	do	St. John's College	Rev. Bro. Fabrician	R. C	9	0
240	do	West End Seminary (2008 F street NW.).	Miss Faust	Nonsect	0	2
	FLORIDA.					
241	Barton	Summerlin Institute	W. F. Yocum	0	4	5
242	Concord	Concord Academy	O. B. Hall		1	1
243	Eustis	Eustis Seminary	Byron F. Marsh	Presb	1	2
244	Gainesville	Miss Tebeau's Boarding and Day School.	Miss Tebeau			
245	Jacksonville	Cookman Institute	Samuel B. Darnell	M. E	2	5
246	Key West	Convent of Mary Immaculate.	Sister M. Delphine, superioress.	R. C	0	3
247	Live Oak	Florida Institute	Rev. J. L. A. Fish	Bapt	1	4
248	St. Augustine	St. Augustine Academy.	Francis M. Wright		1	1
249	San Antonio	Holy Name Academy	Mother Dolorosa Scanlan, O. S. B.	R. C	0	3
250	Tampa	Convent of the Holy Names of Jesus and Mary.	Sister Mary Theophile	R. C	0	2
251	White Springs	Florida Normal School and Business Institute.	J. L. Skipworth	Nonsect	5	4
	GEORGIA.					
252	Acworth	High School	Marion Buford		0	2
253	Albany	Albany Academy	Z. I. Fitzpatrick, superintendent.		0	3
254	Apple Valley	Apple Valley Academy.	B. H. Pearman		1	1
255	Athens	Home School for Young Ladies.	Miss C. Sosnowski	Epis	0	3
256	do	Jeruel Normal School	Prof. J. H. Brown		0	2
257	Atlanta	Atlanta Baptist Seminary.	Rev. George Sale, A B.	Bapt	2	0

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
20	0	----	----	----	----	----	------	------	-------	Yes.	$66,000	$80,000	-------	-------	$5,500	225
0	30	----	----	----	----	5	Yes.	------	600	Yes.	100,600	0	0	$5,000	0	226
0	120	----	----	----	----	----	No..	No..	5,000	Yes.	500	-------	-------	-------	-------	227
30	0	----	----	----	----	----	------	------	-------	------	-------	-------	-------	-------	-------	228
100	0	15	0	5	0	20	No..	No..	500	No..	30,200	-------	-------	6,500	-------	229
58	0	40	0	18	0	----	No..	No..	300	Yes.	-------	-------	-------	-------	-------	230
40	20	20	3	----	----	1	No..	No..	300	Yes.	50,350	0	0	11,500	0	231
66	0	----	----	----	----	----	------	------	11,000	------	-------	-------	-------	-------	-------	232
19	0	2	0	1	0	2	No..	No..	-------	No..	-------	-------	-------	-------	-------	233
0	101	0	2	----	----	9	No..	------	5,550	Yes.	-------	-------	-------	-------	-------	234
0	150	0	5	0	3	13	Yes.	Yes.	900	Yes.	150,200	-------	-------	-------	-------	235
0	50	----	----	----	----	8	No..	No..	1,000	Yes.	500	-------	0	-------	0	236
15	0	8	0	1	0	0	No..	Yes.	0	No..	5,450	0	0	1,065	0	237
0	16	----	----	----	----	2	Yes.	No..	1,000	Yes.	300	-------	0	-------	50	238
71	0	30	0	----	----	2	No..	No..	525	Yes.	160,200	0	0	5,500	0	239
7	13	----	----	----	----	----	No..	No..	-------	Yes.	-------	0	-------	-------	-------	240
20	35	0	0	----	----	0	Yes.	No..	202	Yes.	25,100	0	$4,300	100	100	241
2	2	1	0	----	----	0	No..	No..	0	Yes.	-------	-------	-------	-------	-------	242
12	6	19	19	----	----	----	No..	No..	1,000	Yes.	5,200	-------	-------	-------	-------	243
0	75	----	----	----	----	----	------	------	-------	------	10,000	-------	-------	-------	-------	244
47	53	18	14	----	----	3	Yes.	No..	1,000	Yes.	18,100	0	0	781	600	245
15	45	----	----	----	----	1	No..	------	350	Yes.	75,000	-------	-------	-------	-------	246
54	64	----	----	----	----	0	No.,	No..	1,500	Yes.	7,000	-------	-------	488	359	247
13	13	3	3	----	----	0	------	------	-------	------	3,000	0	0	1,700	-------	248
0	14	0	12	----	----	0	No..	No..	100	Yes.	12,000	-------	0	500	0	249
4	18	5	0	0	10	----	No..	No..	300	Yes.	9,500	-------	-------	-------	-------	250
67	51	60	37	9	12	27	Yes.	No..	500	Yes.	10,100	0	220	5,000	500	251
48	50	----	----	----	----	----	------	------	-------	------	-------	-------	-------	-------	-------	252
78	65	----	----	----	----	----	------	------	-------	------	-------	-------	-------	-------	-------	253
10	8	----	----	----	----	0	No..	No;	0	Yes.	350	-------	200	-------	-------	254
0	40	----	----	----	----	----	Yes.	------	500	------	-------	-------	-------	-------	-------	255
34	56	----	----	----	----	----	------	------	-------	------	-------	-------	-------	-------	-------	256
56	0	3	0	56	0	3	No..	No..	2,375	Yes.	40,000	-------	-------	-------	-------	257

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	GEORGIA—cont'd.					
258	Atlanta	Spelman Seminary	Misses Sophie B. Packard and Hattie E. Giles.	Bapt	1	11
259	....do	Washington Seminary	Mrs. Baylor Stewart	0	1	7
260	....do	West End Academy	E. C. Merry	Nonsect.	1	1
261	Augusta	St. Mary's Academy	Sister Jane Frances	R.C	0	2
262	Blakely	Blakely Academy	A. W. Lane	Nonsect.	0	2
263	Boston	Boston Institute	Wm. B. Fambrough, A. M.	Nonsect.	1	0
264	Bronwood	High School	J. M. Edwards		0	3
265	Butler	Male and Female College.	M. P. Cain, president	Nonsect.	1	3
266	Buck Creek	Mercer Academy	John Jones		0	1
267	Byron	High School	E. H. Ezell	0	1	2
268	Cadley	Felt's School	Wm. Brad Carter		0	1
269	Cartersville	West End Institute	Mrs. J. W. Harris, sr	Nonsect.	0	4
270	Cataula	Oak Grove Academy	Miss M. M. Thompson	Nonsect.	0	1
271	Cedar Grove	St. Mary's Institute	John Y. Wood	0	1	1
272	Cleveland	Cleveland Academy	Dr. Sutton		2	0
273	Columbus	Chappell Female College	J. Harris Chappell		2	5
274	....do	Wynnton College	W. E. Meagley	0	2	5
275	Concord	Middle Georgia Institute	R. D. Shuptvine	0	2	1
276	Crawford	Crawford Academy	A. S. Rhodes	Bapt	1	1
277	Culloden	Male and Female Institute.	J. S. Searcy		0	2
278	Dawson	South Georgia Male and Female College.	W. M. Robinson, president.	Nonsect.	2	3
279	Decatur	Agnes Scott Institute	Miss Nannette Hopkins.	Presb	4	5
280	Doraville	High School	E. C. Lester	Nonsect.	2	1
281	Duluth	Duluth Academy	Leadford A. Williams.	Bapt	1	0
282	Eatonton	Eatonton Academy	Chas. E. Little	Nonsect.	3	3
283	Elder	Goshen Academy	A. Louis Barge		0	1
284	Ellaville	High School	W. B. Merritt, ex-principal.		0	2
285	Ellijay	Ellijay Seminary	J. E. Tallant, A. M., president.	M. E. So.	2	2
286	Fairburn	High School	Robert L. Paine, A. B.		1	3
287	Flowery Branch	Flowery Branch Academy.	J. W. Stephens		1	1
288	Garden Valley	High School	J. O. Mangham		1	1
289	Girard	Girard Academy	L. H. Smith		1	0
290	Grantville	High School	H. H. Tye, A. B.		1	1
291	Greensboro	Fuller Academy	Talfourd Smith		1	1
292	Hamilton	West Georgia Agricultural and Mechanical College.	I. T. Lin	Methodist	1	2
293	Hampton	Hampton Academy	Howell B. Parker		1	2
294	Hephzibah	High School	C. H. S. Jackson, A. M	Bapt	2	2
295	Hillman	Ben Hill Academy	L. A. Murphy	Nonsect.	1	1
296	Hinesville	Bradwell Institute	Geo. M. Mills		1	1
297	Hogansville	Hogansville Academy	H. W. Wooding	0	1	2
298	Hollonville	Planters' High School	J. B. Mathews	Nonsect.	1	1
299	Homer	Homer Academy	R. C. Alexander	Presb	2	1
300	Hoschton	High School	N. A. Moss	Nonsect.	1	2
301	Irwinton	Talmage Institute	Jas. W. Overstreet	Nonsect.	1	1
302	Jackson	Jackson Institute	Addison W. Lynch	Nonsect.	2	2
303	Jefferson	Martin Institute	S. P Orr	Nonsect.	3	4
304	Jeffersonville	Auburn Institute	J. E. McKee	Nonsect.	1	3
305	Jersey	Ragan Institute	T. C. Blasingame	0	1	0
306	La Grange	Male High School	Leonidas Jones	Nonsect.	2	0
307	Lavonia	High School	W. C. Moss, A. C	Nonsect.	1	2
308	Lawrenceville	Lawrenceville Seminary	P. E. Davant	Nonsect.	1	3
309	Leathersville	Liberty Hill High School	Prof. W. A. Hogan, A. B		1	0

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and other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	228	0	0	0	0	14	No..	No..	1,000	Yes.	$90,500	0	0	$2,654	$6,909	256
0	95	----	----	----	----	2	Yes.	Yes.	200	Yes.	25,000	----	----	----	----	259
6	14	4	7	5	0	----	Yes.	No..	150	Yes.	10,000	----	$600	1,884	----	260
----	30	0	0	0	0	----	No..	No..	150	Yes.	40,000	----	1,530	----	----	261
25	35	5	1	0	0	0	Yes.	No..	----	Yes.	3,160	----	----	----	----	262
27	33	0	0	0	0	----	No..	No..	0	Yes.	1,000	----	200	----	----	263
25	20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	264
22	24	0	2	0	0	3	No..	No..	150	Yes.	6,000	----	300	500	----	265
5	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	266
25	25	4	6	2	0	10	No..	No..	0	Yes.	1,500	----	350	1,000	----	267
2	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	268
10	20	2	6	0	0	0	Yes.	----	400	Yes.	2,600	----	0	1,500	----	269
5	5	2	3	1	1	0	No..	No..	0	Yes.	50	----	----	----	----	270
22	19	13	10	12	7	24	No..	No..	0	Yes.	5,000	----	108	1,500	----	271
2	19	0	0	0	0	0	----	Yes.	0	----	500	----	----	460	----	272
0	67	----	----	----	----	3	No..	No..	0	Yes.	25,200	0	----	4,382	0	273
40	45	----	----	----	----	13	No..	No..	----	Yes.	10,000	0	360	----	0	274
18	23	10	2	----	----	0	No..	No..	0	Yes.	----	----	400	1,000	----	275
23	24	12	6	3	4	0	No..	No..	0	----	1,000	----	169	900	----	276
11	7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	277
10	20	----	----	0	0	3	No..	No..	----	Yes.	7,000	----	472	4,500	----	278
0	30	----	16	----	----	0	No..	No..	0	Yes.	50,000	$15,000	----	2,500	61,200	279
20	38	----	----	----	----	0	No..	No..	0	Yes.	----	----	4	672	----	280
8	10	3	2	0	0	0	No..	Yes.	0	Yes.	1,000	----	228	600	0	281
18	22	4	3	3	1	0	No..	No..	0	Yes.	10,000	----	1,000	2,225	----	282
7	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	283
20	28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	284
43	18	----	----	----	----	0	No..	No..	103	Yes.	8,050	0	348	112	400	285
30	27	10	3	----	----	0	No..	No..	20	Yes.	5,850	----	350	1,200	----	286
18	26	3	5	2	1	4	No..	Yes.	0	----	2,000	----	----	570	----	287
52	50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	288
3	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	289
12	9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	290
4	12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	291
29	34	4	3	----	----	3	No..	No..	----	----	3,000	----	----	700	----	292
25	22	8	12	2	0	6	No..	Yes.	0	Yes.	3,250	----	300	1,500	----	293
14	24	8	15	0	0	8	No..	No..	250	Yes.	4,000	0	1,000	460	0	294
20	25	0	10	----	----	----	No..	No..	0	Yes.	513	----	400	600	1,000	295
2	11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	296
22	17	0	0	----	----	0	No..	No..	0	Yes.	1,300	0	307	1,159	0	297
13	10	1	0	0	0	12	No..	No..	0	Yes.	500	----	290	600	----	298
5	4	1	1	1	1	4	No..	No..	0	Yes.	1,000	----	100	400	400	299
15	10	5	3	1	4	----	No..	No..	0	Yes.	1,500	300	285	700	600	300
12	12	----	----	----	----	----	No..	No..	0	Yes.	2,000	----	228	----	----	301
10	13	10	13	----	----	1	No..	No..	50	Yes.	6,000	0	500	2,600	500	302
42	60	42	60	0	0	0	No..	No..	0	Yes.	13,525	15,000	165	3,200	800	303
19	16	14	11	5	5	2	No..	No..	0	Yes.	3,050	0	250	1,300	0	304
14	12	----	----	----	----	----	No..	No..	0	No..	500	----	----	500	----	305
30	0	0	18	6	0	0	No..	No..	0	Yes.	15,000	----	200	1,500	----	306
25	20	15	10	10	6	0	Yes.	No..	----	Yes.	----	----	----	----	----	307
30	26	3	6	----	----	0	No..	No..	0	Yes.	2,000	0	200	----	0	308
6	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	309

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	GEORGIA—cont'd.					
310	Leesburg	Leesburg Academy	J. R. Cain		1	0
311	Lexington	Meson Academy	M. S. Weaver	Nonsect.	1	3
312	Lincolnton	High School	T. A. Nash	Nonsect.	1	0
313	Lost Mountain	Lost Mountain Academy	Walter McElreath		1	1
314	McDonough	McDonough Institute	J. G. C. Parker, A. M	Nonsect.	1	2
315	Macon	Alexander Free School	M. L. Parker		1	1
316	McTyeire	Young Harris' College	Chas. C. Spencer, president.		2	2
317	Madison	Male and Female Institute.	E. C. Merry	Nonsect.	1	2
318	Marietta	Male Academy	J. E. Harris		3	1
319	Marshallville	High School	J. W. Frederick	0	1	2
320	Maxeys	do	M. M. Kilpatrick		1	0
321	Midville	do	W. B. Crawford	Nonsect.	1	0
322	Milner	do	Miss Olive E. Faw, *pro tempore.*		1	2
323	Monroe	Johnston Institute	Jno. Gibson		2	2
324	Montezuma	Spaulding Seminary	Miss Oreola Cheves		0	1
325	Moreland	Moreland Academy	C. Hartsfield		0	1
326	Morven	Morven Academy	Wm. T. Gaulden, A. B.		1	1
327	Mount Airy	Sibley Institute	J. M. Dennis		1	1
328	Mount Zion	Mount Zion Seminary	John F. Palmer	M. E.	1	2
329	Newnan	Walker High School	Daniel Walker	Nonsect.	1	2
330	Norcross	High School and Collegiate Institute.	M. F. Cooledge	Nonsect.	2	1
331	Norwood	Norwood Institute	Rev. J. W. Ellington	Nonsect.	1	1
332	Palmetto	High School	Thomas H. Meacham		0	1
333	Pendergrass	Pendergrass Academy	W. R. Hall	Nonsect.	1	1
334	Penfield	Mercer High School	D. M. Cheney	Bapt	1	1
335	Powder Springs	High School	F. M. Duncan		1	2
336	Putnam	Glenn Holley Academy	J. M. Collum		1	1
337	Quitman	Graded School	Noah W. Cooper		2	2
338	Reynolds	Male and Female Institute.	C. E. McLaughlin		1	1
339	Riddleville	Mount Vernon Institute	Geo. R. Dillon	Bapt	1	1
340	Ringgold	Ringgold Academy	I. J. Woods		1	2
341	Roscoe	Alexander Stephens Academy.	W. L. Stallings, B. PH.		1	1
342	Rutledge	High School	A. J. Burruss	Nonsect.	1	2
343	Savannah	Savannah Academy	John Taliferro	Nonsect.	2	0
344	Schley	Concord High School	C. A. Thompson		1	1
345	Sharon	Sacred Heart Seminary	Sister Clemence	R. C	0	4
346	Sharpsburg	Sharpsburg Academy	G. B. F. Stovall		1	1
347	Smithville	High School	G. M. Patterson		2	0
348	Snow	do	J. E. Kemp	Nonsect.	1	2
349	Social Circle	Social Circle Academy	John A. Saye		2	0
350	Spring Hill	Eastman District High School.	C. C. Hines	M. E. So.	0	2
351	Stone Mountain	High School	S. H. Lindsay		2	2
352	Sumach	Sumach Seminary	C. H. Humphreys	Nonsect.	1	2
353	Temple	Temple Academy	E. L. Connell	Nonsect.	1	1
354	Tennille	High School	W. F. Dykes		1	2
355	Thomaston	R. E. Lee Institute	G. F. Oliphant	Nonsect.	2	3
356	Thomson	Geo. F. Pierce Institute.	Isaac A. Gibson, A. M. M. D.		1	2
357	Walthourville	Walthourville Academy.	M. W. Witchum	Presb	1	0
358	Washington	Female Seminary	Miss Ida A. Young		1	2
359	do	St. Joseph's Academy	Mother St. John	R. C	0	2
360	Whigham	Whigham Academy	L. F. Shuford	Nonsect.	1	1
361	White Plains	Dawson Institute	J. E. Purks	Nonsect.	1	2
362	Williamson	High School	C. W. Richter		1	1
363	Winterville	Winterville Academy	Geo. B. Atkisson		1	1
364	Wrightsville	"Nannie Lou Warthen" Institute.	M. A. Morgan	M. E. So.	2	1

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and other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for collegiate classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
6	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	310
10	15	8	10	4	0	3	No..	No..	500	Yes.	$4,050	$2,500	$180	$1,200	$200	311
10	5	....	....	....	....	....	No..	No..	0	Yes.	....	....	....	....	....	312
12	4	....	....	....	....	0	No..	No..	0	Yes.	500	0	140	160	0	313
25	20	10	12	....	....	....	No..	No..	0	Yes.	3,000	....	250	....	....	314
30	20	....	....	....	....	....	....	....	....	....	....	....	....	....	....	315
96	50	....	....	....	....	....	....	....	....	....	....	....	....	....	....	316
12	15	4	6	....	....	5	Yes.	No..	....	Yes.	2,100	....	300	1,200	....	317
43	0	40	0	3	0	3	No..	Yes.	100	Yes.	3,600	....	240	2,600	....	318
21	19	5	8	3	2	12	No..	No..	150	Yes.	5,000	0	350	1,400	0	319
7	5	....	....	2	0	....	....	....	....	....	....	....	....	....	....	320
12	10	0	0	....	....	12	No..	No..	0	Yes.	2,575	....	350	750	....	321
36	35	....	....	....	....	....	No..	No..	0	....	....	....	20	....	....	322
16	22	16	22	....	....	0	No..	Yes.	0	Yes.	2,650	0	400	1,800	0	323
2	5	0	1	0	0	3	No..	No..	0	Yes.	3,000	....	125	400	....	324
9	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	325
13	12	1	0	....	....	....	No..	No..	....	Yes.	1,200	0	110	468	0	326
10	15	8	2	8	7	10	No..	No..	300	Yes.	850	0	120	500	0	327
5	3	0	0	5	3	0	No..	No..	0	Yes.	3,500	0	225	225	0	328
19	14	12	13	4	3	....	Yes.	No..	160	Yes.	3,000	0	75	1,000	0	329
24	10	14	6	....	....	0	No..	No..	0	Yes.	1,400	0	272	800	....	330
10	12	1	2	....	....	1	No..	No..	0	Yes.	500	0	250	500	0	331
5	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	332
45	40	0	4	5	2	0	....	No..	0	Yes.	1,500	....	230	300	....	333
6	5	2	3	2	0	10	No..	No..	....	Yes.	10,000	800	200	600	80	334
15	15	10	12	5	3	0	No.	No..	800	Yes.	650	0	240	550	0	335
5	7	1	1	0	0	0	No..	No..	0	Yes.	500	0	105	350	0	336
60	40	2	6	0	0	....	No..	No..	0	Yes.	3,000	0	1,400	1,800	0	337
12	12	1	2	1	0	....	No..	No..	0	Yes.	3,000	....	250	850	....	338
20	22	1	3	....	....	2	Yes.	No..	150	....	1,000	....	250	350	....	339
23	18	0	0	10	10	1	Yes.	No..	9	Yes.	4,025	0	67	800	0	340
12	9	0	....	....	....	....	....	....	....	....	....	....	....	....	....	341
65	68	3	4	....	....	....	No..	No..	100	Yes.	2,000	....	....	....	....	342
37	0	22	0	10	0	8	No..	Yes.	0	Yes.	14,000	....	....	3,600	....	343
20	11	10	10	5	6	0	No..	No..	0	Yes.	400	0	250	600	0	344
16	0	0	0	....	....	0	Yes.	Yes.	100	Yes.	4,000	....	....	....	3,000	345
3	7	....	....	....	....	....	No..	No..	0	Yes.	500	....	....	....	....	346
8	27	....	....	....	....	....	....	....	....	....	....	....	....	....	....	347
15	12	5	3	5	2	10	No.	No..	0	Yes.	2,000	0	265	1,750	0	348
4	12	5	11	0	0	5	No..	No..	0	Yes.	1,500	0	183	1,000	0	349
25	10	5	5	6	3	10	No..	No..	0	Yes.	1,200	0	....	400	0	350
20	15	....	....	....	....	....	....	....	....	....	....	....	....	....	....	351
25	15	10	8	8	7	4	No..	No..	50	Yes.	2,200	0	200	600	0	352
30	16	0	0	....	....	0	No..	No..	0	Yes.	800	0	200	400	0	353
20	19	7	5	6	1	2	No..	No..	0	....	2,500	....	....	1,300	....	354
50	69	....	....	5	....	....	No..	No..	400	Yes.	10,400	0	425	1,899	600	355
15	18	....	....	....	....	....	....	....	....	....	....	....	....	....	....	356
10	3	7	3	0	3	0	No..	No..	0	Yes.	325	....	....	....	....	357
0	20	....	....	2	....	....	No.	No..	0	Yes.	5,100	0	325	....	0	358
0	20	0	0	12	0	0	Yes.	No..	300	Yes.	10,150	....	....	500	....	359
16	19	12	6	0	....	....	Yes.	Yes.	0	Yes.	1,500	250	250	400	....	360
10	20	....	8	0	0	0	No..	No..	0	Yes.	3,000	....	325	1,200	0	361
16	15	....	....	....	....	....	....	....	....	....	....	....	....	....	....	362
7	12	....	....	....	....	....	....	....	....	....	....	....	....	....	....	363
20	25	5	0	0	0	0	No..	No..	0	Yes.	6,000	0	600	....	0	364

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	IDAHO.					
365	Paris	Bear Lake State Academy.	Jno. H. Miles		2	4
	ILLINOIS.					
366	Alton	Academy of the Holy Family.	Mother Theresa Gillespie.	R. C	0	7
367	Anna	The Union Academy of Southern Illinois.	W. W. Faris, D. D., and J. W. Stephens, A. M.	Presb	2	3
368	Aurora	Academy of the Sacred Heart.	Sister l'Interieur de Marie.	R. C	0	6
369	....do	Jennings Seminary	C. C. Lovejoy, A. M	M. E	5	3
370	Bunker Hill	Bunker Hill Academy	Rev. Samuel L. Stiver	Cong	2	3
371	Bushnell	Western Normal College and Commercial Institute.	W. M. Evans, Vice-President.	0	8	4
372	Chicago	Dearborn Seminary	Z. Grover	Nonsect	2	8
373	....do	Girl's Higher School	Miss R. L. Rice, Miss M. E. Beedy.	Nonsect	1	5
374	....do	Grant Collegiate Institute.	M. A. Mineah	Nonsect	1	6
375	....do	The Harvard School (2101 Indiana avenue).	J. J. Schobinger and J. C. Grant.		6	5
376	....do	Kenwood Institute	Miss Helen E. Starrett and Annie E. Butts.	Nonsect	1	5
377	....do	Kirkland School	Miss E. S. Kirkland		1	5
378	....do	The Loring School	Miss Stella D. Loring, Miss Mary Louise Loring.	Nonsect	0	7
379	....do	St. Margaret's School	Miss Virginia Sayre	Epis	0	7
380	....do	St. Xavier's Academy	Sister Mary G. Granger	R. C	0	6
381	....do	The University School (223 Dearborn avenue).	E. C. Coulter	Presb	8	2
382	Decatur	St. Teresa's Academy	Mother Teresa	R. C	0	5
383	Du Quoin	Du Quoin Seminary	A. F. Stone	Presb	1	1
384	Elgin	Elgin Academy	Nathan Thompson	Nonsect	2	6
385	Galesburg	St. Joseph's Academy	Sister M. Carmel, Superioress.	R. C	0	2
386	Geneseo	Collegiate Institute	Norbury W. Thornton	Presb	4	3
387	Godfrey	Monticello Female Seminary.	Miss H. N. Haskell	Nonsect	0	14
388	Greenville	Almira College	A. G. Smith, President	0	1	3
389	Highland Park	Northwestern Military Academy.	H. P. Davidson	Nonsect	1	1
390	Joliet	St. Frances Academy	Sister M. Stanislas Droesier.	R. C	0	6
391	Kankakee	St. Joseph's Seminary	Sister St. Zephyrine, Superior.	R. C	0	2
392	Loxa	Lee's Academy	G. W. Lee	Nonsect	1	0
393	Morris	Normal and Scientific School.	L. D. Maltbie	Nonsect	4	4
394	Mt. Morris	Mt. Morris College	J. G. Royer, President		0	6
395	Ottawa	St. Francis Xavier's Academy.	Sisters of Mercy	R. C	0	2
396	Paxton	Rice Collegiate Institute	John H. Parr	Cong	2	1
397	Port Byron	Port Byron Academy	F. F. Thwing	Nonsect	2	2
398	Springfield	Bettie Stuart Institute	Mrs. A. M. Brooks	Nonsect	1	1
399	....do	St. Agatha's School	Miss D. Murdoch	P. E	1	2
400	Toulon	The Toulon Academy	Edward C. Downing	Nonsect	1	1
401	Vermilion Grove	Vermilion Academy	Theo. Reynolds	Friends	1	1
402	Washington Heights.	Our Lady of the Sacred Heart.	M. Pacifica	R. C	0	1

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
27	21	13	12	....	11	10	Yes.	No..	1,000	.....	$11,000	.....	0	$2,000	.....	365
0	30	....	....	....	....	3	No..	No..	200	Yes.	.....	.....	.....	.....	.....	366
50	53	3	3	....	3	2	Yes.	No..	400	Yes.	7,760	$1,700	0	2,160	$300	367
6	24	0	0	....	12	1	Yes.	Yes.	200	Yes.	5,025	0	0	600	0	368
49	51	7	3	10	15	24	No..	No..	500	No..	61,500	.....	.....	3,400	300	369
30	10	9	2	3	0	2	No..	Yes.	500	Yes.	2,500	6	.....	2,000	.....	370
72	72	....	....	....	....	13	No..	No..	500	No..	31,000	0	0	5,569	0	371
0	56	0	2	....	....	8	No..	No..	.....	Yes.	300	0	0	0	0	372
1	27	1	0	....	....	2	No..	No..	1,500	Yes.	.....	0	0	0	0	373
0	50	0	10	....	....	4	No..	Yes.	500	Yes.	500	.....	.....	.....	200	374
100	0	50	0	10	0	20	Yes.	No..	300	Yes.	26,000	0	0	0	0	375
2	80	2	12	....	....	5	No..	No..	200	Yes.	26,150	.....	.....	8,000	.....	376
0	48	....	....	....	....	0	No..	Yes.	1,000	Yes.	26,100	.....	.....	.....	.....	377
0	40	0	5	5	0	2	Yes.	No..	.....	Yes.	50,800	.....	.....	.....	.....	378
0	45	0	0	....	6	8	No..	No..	200	Yes.	25,250	.....	.....	.....	.....	379
0	66	....	....	....	....	....	Yes.	No..	.....	.....	.....	.....	.....	.....	.....	380
82	0	45	0	20	0	10	No..	No..	150	Yes.	22,000	.....	.....	17,500	.....	381
10	40	....	....	....	....	....	....	....	430	....	....	.....	.....	.....	.....	382
16	14	10	0	....	....	10	No..	No..	5,000	No..	21,000	.....	.....	1,000	.....	383
30	29	8	4	1	1	6	No..	No..	260	No..	35,300	.....	.....	2,350	.....	384
0	23	....	....	....	....	1	Yes.	No..	150	Yes.	....	.....	.....	.....	.....	385
49	51	7	1	....	....	20	No..	No..	300	No..	25,150	7,500	.....	1,000	162	386
0	109	0	100	....	....	.....	No..	Yes.	2,000	Yes.	250,500	1,000	.....	.....	0	387
2	12	....	....	....	....	....	....	....	1,500	.....	50,200	.....	.....	4,000	.....	388
25	0	1	0	10	0	6	No..	Yes.	300	Yes.	50,025	.....	.....	.....	.....	389
0	37	....	....	....	....	.....	Yes.	No..	690	Yes.	120,150	0	0	0	0	390
0	25	....	....	....	20	1	Yes.	No..	612	Yes.	32,300	0	0	5,250	0	391
19	18	2	2	0	0	1	No..	No..	0	No..	1,000	0	0	555	0	392
50	20	15	5	9	11	3	No..	Yes.	400	Yes.	4,150	.....	.....	2,590	.....	393
32	18	....	....	....	....	.....	Yes.	Yes.	25,000	Yes.	60,500	10,000	0	0	600	394
0	50	0	0	....	30	3	Yes.	No..	100	Yes.	40,100	4,000	0	3,000	900	395
7	15	1	2	3	0	0	No..	No..	20	No..	10,060	0	0	1,000	1,700	396
7	15	....	....	....	....	3	No..	No..	50	No..	9,060	13,000	0	466	1,202	397
2	23	....	....	....	....	1	No..	No..	325	Yes.	30,500	0	0	3,000	0	398
0	30	0	0	....	....	9	No..	Yes.	250	Yes.	20,100	0	0	3,448	80	399
29	21	5	8	....	....	2	No..	No..	0	No..	850	0	0	755	1,120	400
23	44	....	....	....	....	5	No..	No..	300	No..	4,025	9,000	0	137	700	401
0	17	....	....	....	....	0	.....	Yes.	2,575	Yes.	65,200	0	.....	11,876	.....	402

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	INDIANA.					
403	Bloomingdale	Friends Academy	A. F. Mitchel	Friends	1	3
404	Fairmount	Fairmount Academy	Ryland Ratliff	Friends	2	1
405	Fort Wayne	St. Augustine's Academy	Sr. Mary Ephrem	R. C	0	2
406	....do	Westminster Seminary for Young Ladies.	Mrs. D. B. Wells and Miss Carrie B. Sharp.	Presb	0	3
407	Indianapolis	Girls' Classical School	T. L. Sewall	Nonsect	1	5
408	....do	Boys' Classical School	L. R. Baugher	Nonsect	2	1
409	...do	Institute for Young Ladies.	James Lyon	P. E	1	3
410	....do	St. John's Academy	Sister Theodata	R. C	0	1
411	Lima	Howe Grammar School	Rev. C. N. Spalding, D. D.	P. E	5	0
412	Marengo	Marengo Academy	Rev. J. M. Johnson, A. M.	Nonsect	1	0
413	Plainfield	Central Academy	Geo. W. White	Friends	1	1
414	Salem	Elkosi Academy	S. W. Phillips		1	1
415	Spiceland	Spiceland Academy	Thomas Newlin	Friends	3	5
416	Vincennes	St. Rose's Academy	Srs. of Providence	R. C	0	2
417	Westfield	Union High School	J. F. Brown	Nonsect	1	1
	INDIAN TERRITORY.					
418	Atoka	Baptist Academy	F. B. Smith	Bapt	1	0
419	Bacone	Indian University	A. C. Bacone, A. M	Bapt	3	3
420	Muskogee	Harrell International Institute.	Theo. F. Brewer	M. E. So	1	1
421	Nelson	Spencer Academy	Alfred Docking, superintendent.	Presb	1	0
422	Oak Lodge	New Hope Female Seminary.	A. Griffith, M. D	M. E	1	1
423	Tahlequah	Cherokee National Female Seminary.	Miss A. F. Wilson	Nonsect	1	2
424	Vinita	Worcester Academy	John McCarthy	Cong	1	1
	IOWA.					
425	Ackworth	Ackworth Academy	H. C. Carter	Friends	1	1
426	Birmingham	Birmingham Academy	J. W. Wolf	Nonsect	1	1
427	Burlington	Burlington Institute	G. J. Johnson, president of board of trustees.	Bapt	2	3
428	Corning	Corning Academy	Harrison Clarke	Presb	2	1
429	Davenport	St. Ambrose Seminary	A. J. Schulte	R. C	5	0
430	Decorah	Decorah Institute	J. Breckenridge		3	1
431	Denmark	Denmark Academy	A. Sidney Johnson, M. A., PH. D.	Cong	2	2
432	Dubuque	St. Josephs' College	Very Rev. R. Ryan	R. C	5	0
433	Emmetsburg	St. Mary's Academy	Sister Mary Casimir	R. C	0	1
434	Epworth	Epworth Seminary	W. S. Lewis	Meth	3	5
435	Fort Dodge	Collegiate Institute	L. Y. Hays (Rev.)	Presb	6	1
436	Fort Madison	St. Joseph's Parochial School.	Sister Superior	R. C	1	3
437	Hull	Educational Institute	James B. Chase	Cong	2	5
438	Iowa City	Iowa City Academy	Robt. H. Tripp, A. M.	Nonsect	5	6
439	Le Grand	Christian College	D. M. Helfinston, president.	Christian	1	1
440	....do	Friends' Academy	Alvah Negus	Friends	1	2
441	McGregor	St. Mary's Academy	Charles Carroll	R. C	1	1
442	New Providence	New Providence Academy.	Charles B. Newby		2	2
443	Newton	Hazel Dell Academy	G. W. Wormley	Friends	2	1
444	Orange City	Northwestern Classical Academy.	J. A. De Spelder, *pro tempore.*	Reformed	1	2

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
15	14	0	0	....	....	4	No..	Yes.	400	Yes.	$10,500	$6,000	0	$1,600	$400	403
23	12	0	0	5	1	3	No..	No..	100	Yes.	10,200	.....	$1,200	600	.....	404
0	40	....	....	....	5	5	Yes.	No..	29	Yes.	70,125	.....	.....	.....	.....	405
10	20	0	0	0	0	2	No..	Yes.	1,000	Yes.	12,000	.....	.....	4,000	100	406
0	100	0	0	....	....	11	No..	Yes.	.....	Yes.	15,150	.....	.....	.....	.....	407
31	0	0	0	4	0	6	No..	Yes.	0	Yes.	7,000	.....	.....	.....	.....	408
0	40	0	0	....	....	6	Yes.	No..	200	Yes.	20,100	.....	.....	3,000	.....	409
0	22	....	....	0	12	5	No..	.....	300	Yes.	.....	.....	.....	.....	.....	410
40	0	15	0	0	25	8	No..	Yes.	450	Yes.	40,000	10,000	.....	.....	600	411
5	1	2	0	0	0	0	No..	No..	100	Yes.	2,000	.....	.....	563	.....	412
33	34	5	5	....	....	9	Yes.	No..	300	No..	2,100	.....	.....	1,400	200	413
7	1	0	0	....	....	0	No..	No..	100	Yes.	2,500	.....	.....	600	.....	414
36	40	20	15	....	....	5	No..	No..	2,500	Yes.	11,000	5,000	3,000	2,500	200	415
0	25	0	5	....	10	2	Yes.	No..	300	Yes.	.....	.....	.....	.....	.....	416
25	25	0	1	8	3	11	No..	No..	200	Yes.	3,025	5,000	0	2,000	400	417
1	6	0	0	....	....	0	No..	No..	100	Yes.	5,615	0	579	1,700	2,000	418
50	29	....	....	....	....	3	Yes.	No..	500	Yes.	30,000	.....	.....	1,228	481	419
5	28	12	10	....	....	0	No..	No..	375	Yes.	2,500	.....	.....	.....	.....	420
10	0	10	0	....	....	.....	No..	No..	.....	Yes.	20,000	.....	.....	.....	.....	421
0	29	0	0	0	4	10	No..	No..	150	Yes.	20,000	.....	10,000	0	0	422
0	43	....	....	....	....	3	No..	No..	400	Yes.	80,000	.....	13,150	.....	.....	423
11	19	1	1	....	....	1	No..	No..	300	Yes.	10,000	.....	.....	900	225	424
10	10	3	4	....	....	2	No..	No..	300	Yes.	5,050	.....	.....	465	.....	425
14	11	3	2	....	....	1	No..	No..	.....	.....	3,000	.....	.....	400	.....	426
18	23	10	13	10	8	0	No..	No..	2,000	Yes.	25,250	15,000	0	1,000	900	427
40	30	8	0	0	5	4	No..	No..	.....	No..	15,000	0	0	1,700	1,200	428
45	0	19	0	4	0	6	No..	Yes.	3,340	.....	20,000	.....	.....	.....	5,015	429
41	20	....	....	....	....	0	No..	Yes.	400	.....	3,600	.....	.....	.....	.....	430
20	24	5	0	....	....	1	No..	No..	2,000	No..	25,750	17,000	.....	750	.....	431
0	57	....	....	....	....	.....	No..	Yes.	.....	.....	.....	.....	.....	.....	.....	432
3	5	0	0	0	0	0	No..	No..	60	Yes.	8,000	.....	.....	676	174	433
37	30	12	10	25	20	9	No..	No..	1,000	No..	20,400	.....	.....	3,000	2,000	434
65	32	5	3	60	29	9	No..	No..	0	No..	10,500	.....	.....	1,400	1,200	435
16	20	....	....	....	....	.....	Yes.	No..	.....	Yes.	4,000	.....	450	365	.....	436
35	38	7	2	5	10	1	No..	No..	1,050	No..	12,025	21,000	.....	1,200	2,050	437
125	100	0	0	....	....	22	No..	No..	300	Yes.	2,300	.....	.....	3,900	.....	438
6	10	3	1	3	1	0	No..	No..	300	No..	20,000	.....	.....	800	.....	439
28	39	....	....	....	....	6	No..	No..	500	No..	25	.....	.....	.....	.....	440
8	10	2	0	5	8	5	Yes.	Yes.	198	Yes.	2,250	.....	.....	500	600	441
57	44	....	....	....	....	14	Yes.	No..	250	No..	9,100	.....	.....	2,000	.....	442
42	37	8	5	2	0	11	Yes.	No..	400	No..	5,050	.....	.....	1,400	.....	443
39	9	0	0	....	....	5	No..	No..	1,200	No..	6,930	3,650	.....	.....	3,755	444

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	IOWA—continued.					
445	Osage	Cedar Valley Seminary	Alonzo Abernethy	Bapt	4	3
446	Pleasant Plain	Pleasant Plain Academy.	Louis T. Hill	Friends	1	2
447	Salem	Whittier Academy	James Welsh, president.		3	1
448	Springdale	Springdale Seminary	D. W. Evans	0	1	3
449	Vinton	Tilford Collegiate Academy.	Thomas F. Tobin, A. M., PH. D.	0	4	1
450	Washington	Washington Academy	S. E. McKee		2	2
451	Wilton Junction	Norton Academy	J. D. Wells (Rev.)	Cong	2	0
	KANSAS.					
452	Atchison	Latin School	Carlton A. Foote		1	1
453	Enterprise	Harrison Normal College.	James F. Sigler	Nonsect	2	1
454	Eureka	Southern Kansas Academy.	Rev. Arthur T. Burnell, A. M., PH. D.	Cong	3	3
455	Galena	Spring River Academy	Henry S. Harvey	Friends	1	0
456	Glen Elder	Grellet Academy	Irvin Stanley	Friends	1	0
457	Halstead	Mennonite Seminary	H. H. Ewert		2	0
458	Hesper	Hesper Academy	Theo. Reynolds, A. M.	Friends	1	1
459	Hiawatha	Hiawatha Academy	J. Edw. Banta	Nonsect	4	3
460	Larned	Toole's Academy	F. R. Poole	Nonsect	2	2
461	Lincoln	Kansas Christian College.	Thomas Bartlett, president.	Christian	3	1
462	McPherson	McPherson College	S. Z. Sharp, A.M., president.		2	2
463	Morrill	Morrill College	F. W. Houchins, president.	Nonsect	3	2
464	North Branch	North Branch Academy	H. H. Townsend	Friends	2	1
465	Olathe	Normal University	S. S. Biggs, A. M., PH. D.	0	2	1
466	Osage	St. Ann's Academy	Mother Catharine	R. C	0	1
467	Salina	St. John's School (Episcopal Military Institute).	Rev. E. P. Chittenden, rector; W. M. Jay, A. M., head master.	P. E	4	0
468	Tonganoxie	Friends' Academy of Tonganoxie.	H. C. Fellow	Friends	2	0
469	Washington	Washington Academy	Wm. C. Pidgeon	Friends	1	1
470	Wichita	Lewis Academy	J. M. Naylor	Presb	2	6
471	Winfield	Southwest Kansas College.	M. E. Phillips, president.	M. E	6	0
	KENTUCKY.					
472	Bardstown	Male and Female Institute.	R. H. Stone	Bapt	3	4
473	Buffalo	East Lynn College	S. A. Beauchamp, B. S.	Nonsect	1	1
474	Burkesville	Alexander College	James P. McMillan	Presb	1	1
475	Cecilian	Cecilian College	H. A. Cecil	R. C	2	0
476	Clinton	Marvin College	J. C. Dean	Meth	4	1
477	Columbia	Male and Female High School.	W. H. Carney, president.		3	2
478	Corinth	Corinth Academy	T. J. McBeath	Nonsect	1	0
479	Covington	Select School and Kindergarten.	Miss M. L. Gibson	Nonsect	0	2
480	....do	Notre Dame Academy	Maria Hildegarde	R. C	0	1
481	....do	Rugby School	W. G. Lord	Nonsect	1	1
482	Crittenden	English and Classical School.	Frank L. Mayham	Nonsect	1	1
483	Cynthiana	The Lockhart Classical School for Young Men and Boys.	W. H. Lockhart	0	1	1
484	....do	Smith's Classical School	N. F. Smith		1	3
485	Danville	Misoronr Seminary	Mrs. R. J. Breckinridge	Nonsect	1	1

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and other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
35	24	10	15	20	10	10	No.	No.	800	Yes	$30,800	$8,000	.....	$3,000	$709	445
23	34	0	0	....	....	4	No.	No.	300	Yes.	2,505	.....	.....	1,150	109	446
40	32	....	....	....	....	0	.....	No.	600	No.	7,000	.....	.....	.....	.....	447
19	14	....	....	....	....	2	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	448
206	115	5	4	7	8	14	No.	No.	800	Yes.	20,200	.....	.....	3,600	.....	449
78	75	23	17	14	24	19	No.	No.	.....	No.	15,000	.....	.....	.....	.....	450
53	30	....	....	....	....	0	No.	No.	200	No.	20,000	.....	.....	.....	.....	451
8	11	1	0	1	0	....	No.	No.	.....	.....	150	.....	.....	.....	.....	452
19	22	10	9	10	12	6	Yes.	No.	200	Yes.	2,300	.....	.....	2,500	.....	453
40	50	1	4	7	8	10	Yes.	No.	1,500	Yes.	15,250	1,600	.....	1,530	962	454
4	6	....	....	....	....	0	No.	No.	600	.....	8,100	0	.....	0	0	455
8	3	....	....	....	....	0	No.	No.	100	.....	2,640	0	.....	650	0	456
29	6	0	0	....	....	4	Yes.	No.	250	No.	10,005	125	0	856	1,219	457
11	14	....	....	....	....	5	Yes.	No.	210	Yes.	3,500	0	0	600	0	458
57	94	14	14	17	23	8	No.	No.	50	No.	20,200	6,000	0	2,400	450	459
50	40	12	8	23	18	15	Yes.	Yes.	200	Yes.	5,250	0	0	4,000	0	460
29	20	....	....	....	....	4	No.	No.	200	Yes.	15,000	2,500	.....	600	145	461
20	0	3	0	12	2	0	Yes.	Yes.	500	Yes.	40,100	5,000	.....	3,000	1,675	462
37	38	3	1	....	....	0	No.	No.	0	Yes.	5,000	.....	.....	.....	.....	463
39	26	....	....	....	....	0	No.	No.	63	No.	12	2,000	.....	338	409	464
60	50	40	20	20	30	40	No.	Yes.	.....	Yes.	.....	.....	.....	3,000	.....	465
0	30	0	12	0	12	3	No.	No.	500	Yes.	80,700	0	.....	3,000	0	466
35	0	10	0	15	0	2	No.	No.	300	No.	85,250	.....	.....	.....	.....	467
21	12	....	....	....	....	7	No.	No.	425	.....	6,150	.....	.....	1,024	.....	468
32	28	....	....	....	....	0	No.	No.	0	No.	5,050	.....	.....	500	2,000	469
75	61	9	12	4	16	0	Yes.	No.	125	Yes.	75,150	.....	.....	5,000	1,500	470
70	50	....	....	....	....	5	No.	Yes.	500	Yes.	40,100	15,000	.....	2,945	25	471
27	21	....	....	....	....	4	.....	Yes.	0	Yes.	6,000	.....	.....	.....	.....	472
15	25	....	....	....	30	10	No.	No.	150	Yes.	1,500	.....	$244	400	.....	473
5	11	0	4	....	....	1	No.	No.	1,000	Yes.	12,000	6,000	0	1,400	520	474
25	0	5	0	20	....	8	No.	.....	5,000	Yes.	50,000	.....	.....	2,500	.....	475
30	15	5	5	....	....	3	No.	No.	250	Yes.	15,000	.....	.....	2,500	.....	476
16	29	7	16	19	13	....	Yes.	No.	128	.....	14,547	.....	0	1,320	.....	477
24	26	....	....	....	....	0	No.	No.	0	Yes.	2,500	.....	494	1,207	.....	478
0	15	....	....	....	....	0	No.	No.	600	Yes.	.....	.....	.....	3,200	.....	479
0	11	0	0	....	....	5	Yes.	No.	1,200	Yes.	50,100	.....	.....	1,753	.....	480
20	....	15	0	2	0	6	No.	No.	300	Yes.	4,100	.....	.....	2,300	.....	481
10	7	....	....	....	....	.....	.....	No.	0	.....	.....	.....	.....	850	.....	482
25	20	8	4	2	2	0	Yes.	No.	125	Yes.	2,520	.....	.....	1,200	1,200	483
40	28	15	6	0	0	0	No.	No.	400	Yes.	6,800	.....	.....	2,500	.....	484
5	25	....	....	....	....	2	No.	No.	1,100	Yes.	5,000	.....	.....	2,800	.....	485

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	KENTUCKY—cont'd.					
486	Eddyville	Eddyville Academy	J. W. Furnish, PH. D.	Nonsect.	1	2
487	Flippin	Monroe Normal School	E. T. Thomas		4	1
488	Frankfort	Dudley Institute	T. M. Turner	Nonsect.	1	2
489	Fredonia	Fredonia Seminary	Thomas J. Currey, jr.	Cumb	1	1
490	Fulton	Mrs. S. H. Welch High School.	Mrs. S. H. Welch		1	4
491	Gethsemane	Preparatory and Select School of the Abbey of Gethsemane.	Rev. B. M. Edward	R. C	1	0
492	Greenville	Male and Female College.	Mrs. Sarah T. Hall, president.	M. E. So	1	2
493	Harrodsburg	Harrodsburg Academy	R. H. Crossfield		2	2
494	Henderson	Female Seminary	Miss Sue S. Towles		1	1
495	do	High School	Miss Ruth Priest		1	4
496	Hiseville	Hiseville Academy	E. P. Gillenwaters		1	2
497	Hodgenville	La Rue Seminary	Irving L. Tivelley	Nonsect.	0	1
498	Jackson	Jackson Academy	John J. Dickey	0	2	2
499	La Grange	Funk Seminary	Jno. W. Selph	Nonsect.	1	1
500	Lawrenceburg	Birdwhistell Academy	J. M. B. Birdwhistell	0	1	0
501	Leitchfield	Grayson Seminary	W. P. Arnold	Nonsect.	1	2
502	Lewisburg	High School	D. B. Estes		0	1
503	Lexington	St. Catharine's Academy	Sister Lucy Lampton	R. C	0	1
504	Louisville	Kentucky Home School	Miss B. S. Peers	P. E	0	7
505	do	Military Academy	Robt. D. Allen	0	3	0
506	do	Presentation Academy	Sister Sophia	R. C	0	1
507	do	Rugby School	Bain & Bain	Nonsect.	1	1
508	Maysville	Female Seminary	John S. Hays	Nonsect.	1	2
509	Millerstown	Millerstown Seminary	J. W. McClure	0	2	2
510	Morehead	Normal School	F. C. Button	Christian	1	1
511	Moreland	Glen Elder Select School	Mrs. Lizzie Hawkins	Presb	1	1
512	Nazareth	Nazareth Literary and Benevolent Institution	Mother Cleophas Mills, superioress.	R. C	0	2
513	New Castle	Christian Bible School	T. Augustus Reid, A.B., D. D.	Christian	1	1
514	Paris	Private School	W. L. Yerkes		1	0
515	do	Select School	Miss M. S. Tipton		0	2
516	Pikeville	Collegiate Institute	Rev. David Blythe	Presb	1	1
517	Princeton	do	Rev. H. H. Allen, D. D	Presb	1	3
518	Russellville	Miss Sevier's School	Miss Elizabeth Sevier		0	1
519	St. Joseph	Mount St. Joseph's Academy.	Sister M. Martina	R. C	0	2
520	Sharpsburg	Male and Female College	Mrs. Fannie B. Talbot	Nonsect.	0	1
521	Shelbyville	Sampson & Scearce Academy.	Geo. L. Sampson, Geo. S. Scearce.	Nonsect	3	0
522	do	Science Hill School	W. T. Poynter	M. E. So	1	7
523	Slaughtersville	Van Horn Institute	Leon B. Henry	Nonsect.	1	0
524	Vanceburg	Riverside Seminary	Lawrence Rolfe	Nonsect.	1	1
525	Versailles	Rose Hill Seminary	Mrs. Gillie B. Crenshaw	Nonsect.	0	1
526	Waynesburg	Waynesburg Seminary	G. N. Fry, professor	Nonsect.	1	1
527	Winchester	Collegiate Academy	Wm. B. Stewart	Nonsect.	1	1
528	Wingo	Wingo College	J. N. Deahl	Nonsect.	1	2
	LOUISIANA.					
529	Arcadia	Male and Female College.	R. A. Smith and J. W. Benson.	Nonsect.	2	2
530	Baton Rouge	St. Mary's School	L. F. Smith	Epis	0	2
531	Bellevue	Bellevue Academy	W. A. Le Rosen	0	1	1
532	Coushatta	Male and Female College.	C. I. Davis, A. M	0	2	1
533	Grand Coteau	Academy of the Sacred Heart.	Madame M. Fesser	R. C	0	1
534	Lafayette	Mount Carmel Convent	Mother St. Patrick	R. C	0	10

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and other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
35	29	16	18	11	13	3	Yes.	No..	300	Yes.	$2,500	.....	$400	$900	.....	486
40	42	....	....	....	....	.....	No..	No..	.....	Yes.	2,000	.....	324	85	$453	487
24	27	....	....	....	....	.....	No..	No..	500	Yes.	5,000	.....	.....	2,200	.....	488
18	20	4	0	1	0	8	.....	No..	0	Yes.	.....	.....	290	570	.....	489
81	124	23	47	....	....	1	No..	No..	.....	Yes.	6,000	.....	.....	.....	.....	490
15	0	....	....	....	....	5	No..	.....	530	Yes.	8,000	$8,500	.....	.....	340	491
17	20	....	....	....	....	0	No..	No..	.....	Yes.	50,000	.....	.....	2,500	.....	492
60	40	15	4	....	....	8	No..	Yes.	1,000	Yes.	7,000	.....	.....	.....	5,000	493
21	21	....	....	....	....	1	Yes.	Yes.	80	Yes.	5,025	.....	.....	1,500	.....	494
49	42	....	....	....	....	11	No..	No..	350	Yes.	6,020	3,000	.....	2,150	150	495
17	20	....	....	17	20	.....	No..	No..	.....	Yes.	500	.....	500	500	.....	496
0	10	0	10	....	....	.....	No..	No..	150	Yes.	2,500	.....	.....	.....	.....	497
35	30	10	0	5	4	0	No..	No..	2,000	Yes.	10,000	.....	225	1,200	.....	498
27	34	15	8	7	0	0	No..	Yes.	.....	Yes.	7,600	5,000	800	2,000	300	499
10	6	....	....	....	....	0	No..	No..	.....	Yes.	1,000	.....	.....	900	.....	500
35	25	0	0	....	....	0	No..	No..	0	Yes.	2,000	.....	.....	1,500	.....	501
23	19	3	4	4	2	.....	.....	.....	.....	.....	1,200	.....	250	750	.....	502
0	15	....	....	....	....	4	No..	No..	500	Yes.	245	.....	.....	.....	.....	503
0	79	0	0	0	0	6	No..	Yes.	0	Yes.	32,000	.....	0	0	.....	504
37	0	14	0	13	0	0	Yes.	Yes.	1,500	Yes.	75,000	.....	.....	3,300	.....	505
0	28	....	20	....	....	5	No..	No..	.....	Yes.	.....	.....	.....	2,849	.....	506
30	0	....	....	....	....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	507
4	36	....	....	....	....	3	Yes.	No..	.....	Yes.	10,000	.....	.....	3,000	.....	508
30	25	10	7	12	5	8	No..	No..	360	Yes.	3,050	.....	.....	3,000	.....	509
40	35	....	....	....	....	12	No..	No..	100	Yes.	.....	.....	.....	300	.....	510
15	20	....	....	....	....	.....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	511
0	44	....	....	....	....	5	Yes.	No..	5,000	Yes.	.....	.....	.....	.....	.....	512
14	13	5	7	6	8	3	No..	No..	1,200	Yes.	10,150	12,000	.....	300	1,000	513
35	0	18	0	....	....	10	No..	No..	.....	No..	3,000	.....	.....	2,500	.....	514
0	16	0	10	0	6	0	No..	Yes.	400	Yes.	4,500	.....	.....	1,200	.....	515
9	10	....	....	....	....	0	No..	No..	50	Yes.	10,000	.....	.....	.....	50	516
18	26	14	15	4	11	9	Yes.	No..	1,200	Yes.	40,100	9,000	.....	3,243	1,871	517
8	6	....	....	....	....	.....	No..	No..	0	Yes.	5,000	.....	.....	.....	.....	518
0	25	0	25	....	....	2	No..	No..	.....	Yes.	20,000	.....	.....	.....	.....	519
10	12	0	0	....	....	0	No..	No..	450	Yes.	.....	.....	456	1,600	.....	520
60	0	25	0	....	....	10	No..	No..	0	Yes.	4,000	.....	.....	4,200	.....	521
15	105	....	....	....	....	5	.....	.....	2,000	.....	25,500	.....	.....	7,000	.....	522
12	10	3	1	5	5	0	No..	No..	0	Yes.	1,500	.....	.....	1,000	.....	523
12	16	1	0	0	0	2	No..	No..	.....	.....	.....	.....	.....	.....	.....	524
11	25	1	17	1	15	.....	No..	Yes.	500	Yes.	10,000	.....	.....	.....	.....	525
28	20	1	1	1	1	2	No..	No..	.....	Yes.	800	.....	400	.....	.....	526
14	26	7	0	9	0	9	No..	No..	650	Yes.	10,650	.....	.....	.....	.....	527
20	12	1	1	4	2	0	No..	No..	0	Yes.	4,000	.....	500	575	.....	528
48	69	35	50	20	12	8	Yes	No..	342	Yes	6,050	.....	.....	6,350	.....	529
0	26	0	0	0	0	2	No..	No..	0	.....	.....	.....	.....	1,000	.....	530
6	4	1	2	....	....	.....	No..	No..	0	.....	150	.....	200	200	.....	531
30	30	4	0	....	....	0	No..	No..	0	Yes.	3,000	.....	1,350	475	.....	532
0	10	....	....	....	....	1	No..	No..	200	Yes.	.....	.....	.....	.....	.....	533
45	104	25	40	7	10	3	No..	Yes.	356	Yes.	15,025	.....	.....	2,125	.....	534

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	LOUISIANA—cont'd.					
535	New Iberia	Graded School	Miss M. Louise Fasnarht.	Nonsect.	1	2
536	....do	Mount Carmel Convent.	Sisters of Mount Carmel.	R. C	0	1
537	....do	Rectory School	Rev. C. C. Kramer	Nonsect.	1	0
538	New Orleans	Carnatz Institute	L. De Varenne		0	2
539	....do	English and Classical Institute.	T. W. Dyer	0	3	2
540	....do	Home Institute (No. 154 Robin street).	Miss Sophie B. Wright	0	2	1
541	....do	Leche's Graded Institute.	Amadeus S. Leche	0	2	1
542	....do	Picard Institute	Mrs. A. Picard	R. C	2	12
543	....do	St. Isidore's College	Rev. P. P. Klein, C. S. C.	R. C	6	0
544	....do	St. Joseph's Institute	Mrs. L. A. Fortier	Nonsect.	0	5
545	....do	School for Young Ladies (429 Carondelet street).	Misses Dykers	Christian	0	3
546	....do	Southern Academic Institute.	Mrs. J. E. Seaman	Nonsect.	1	2
547	Opelousas	Academy of the Immaculate Conception.	Sister M. of St. Albina, M. de S. C.	R. C	0	2
548	....do	Female Institute	Mrs. M. M. Hayes	Meth	1	2
549	Thibodeaux	Mount Carmel Convent.	Sister St. Gabriel	R. C	0	2
550	....do	Thibodeaux College	Rev. C. M. Menard	R. C	5	0
551	Washington	Mount Carmel Convent.	Mother Hyacinthe	R. C	0	7
	MAINE.					
552	Athens	Somerset Academy	F. W. C. Wiggin, A. B.	0	1	1
553	Bethel	Gould Academy	A. D. Hall	Nonsect.	1	2
554	Bucksport	East Maine Conference (Seminary).	Rev. A. F. Chase	M. E	5	2
555	Deering	St. Joseph's Academy	Sister M. Adelaide	R. C	0	2
556	East Machias	Washington Academy	I. Hovey Robinson		1	1
557	Farmington	Abbott Family School for Boys.	A. H. Abbott		3	3
558	Fryeburg	Fryeburg Academy	J. E. Dinsmore, A. M	Nonsect.	1	2
559	Gray	Pennell Institute	Lee B. Hunt	Nonsect.	1	3
560	Hampden	Hampden Academy	W. R. Hunt	Nonsect.	3	0
561	Houlton	Richer Classical Institute.	A. M. Thomas, A. M	Bapt	2	2
562	Limington	Limington Academy	W. G. Lord	Nonsect.	1	1
563	Monmouth	Monmouth Academy	B. M. Avery	0	1	1
564	New Castle	Lincoln Academy	Henry K. White, A. M.	Nonsect.	1	2
565	North Bridgton	Bridgton Academy	Llewellyn Barton	Nonsect.	4	7
566	Pittsfield	Maine Central Institute.	O. H. Drake	Bapt	4	4
567	Saco	Thornton Academy	Edwin P. Sampson	0	2	5
568	South Berwick	Berwick Academy	Geo. A. Dickey	Nonsect.	1	2
569	Strong	May School	J. H. May	Nonsect.	2	4
570	Waterford	Douglass Seminary	Miss H. E. Douglass	Cong	0	4
571	Waterville	Coburn Classical Institute.	James H. Hanson	Bapt	2	3
572	Wilton	Wilton Academy	Clinton J. Richards		2	4
	MARYLAND.					
573	Ammendale	Normal Institute	Bro. Romwald	R. C	7	0
574	Baltimore	Academy of the Visitation.	Mother M. B. Millard	R. C	0	25
575	....do	Boys' School of St. Paul's Parish (No. 8 East Franklin street).	C. L. C. Minor, M. A., LL. D.	P. E.	2	0

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
9	22	0	2	....	....	0	.....	.....	400	Yes.	$1,700	.....	.....	.....	.....	535
0	15	....	....	....	....	2	No..	No..	200	.....	7,000	.....	.....	$1,800	$70	536
3	4	1	5	1	0	0	No..	No..	0	Yes.	1,000	$300	.....	300	300	537
0	50	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	538
55	0	5	0	0	0	7	Yes.	No..	.....	.....	.....	.....	.....	7,420	.....	539
0	25	0	10	0	0	6	No..	Yes.	450	Yes.	.....	.....	.....	3,000	.....	540
58	0	12	0	10	0	12	Yes.	Yes.	500	Yes.	26,000	.....	.....	38,000	.....	541
28	80	0	0	....	....	8	No..	No..	0	Yes.	15,000	.....	.....	.....	.....	542
100	0	30	0	8	0	3	No..	No..	300	Yes.	30,000	.....	.....	6,500	.....	543
0	50	0	15	10	0	0	No..	No..	200	Yes.	10,000	.....	.....	3,000	.....	544
0	40	....	....	....	....	2	Yes.	No..	300	Yes.	8,000	.....	.....	.....	.....	545
0	30	0	10	....	....	6	No..	No..	300	Yes.	20,000	.....	.....	.....	.....	546
0	12	....	....	....	....	0	Yes.	No..	275	Yes.	12,000	.....	.....	1,050	2,398	547
20	40	10	0	....	....	7	No..	No..	75	Yes.	5,060	.....	.....	1,000	.....	548
0	18	....	....	....	....	0	No..	No..	500	.....	.....	.....	.....	.....	.....	549
50	0	.....	.....	.....	.....	.....	No..	No..	.....	Yes.	8,000	.....	.....	1,200	.....	550
0	45	....	....	....	....	1	No..	No..	120	Yes.	5,000	.....	.....	2,000	.....	551
55	63	13	24	....	....	0	No..	No..	75	No..	4,000	6,000	0	200	350	552
33	45	10	8	1	0	3	No..	No..	518	No..	6,050	1,000	.....	900	110	553
93	79	34	8	....	....	45	No..	No..	4,000	No..	31,500	22,000	.....	4,275	8,400	554
0	14	0	0	....	....	3	No..	No..	300	Yes.	12,000	.....	.....	.....	.....	555
19	23	9	1	....	....	11	No..	No..	250	.....	.....	.....	.....	.....	.....	556
20	0	6	0	4	0	....	No..	Yes.	2,500	Yes.	6,000	.....	.....	.....	.....	557
10	16	13	4	1	0	9	No..	No..	800	Yes.	31,000	12,000	.....	1,300	1,100	558
10	16	4	6	7	9	10	No..	No..	400	Yes.	20,500	25,000	$250	100	1,200	559
20	20	5	0	8	7	16	.....	No..	300	No..	2,600	1,000	260	1,100	60	560
60	40	14	2	....	....	12	No..	No..	500	Yes.	60,200	35,000	1,120	1,700	1,900	561
30	34	12	5	....	....	3	No..	No..	250	.....	3,075	800	.....	225	32	562
30	26	6	4	....	....	0	No..	No..	.....	No..	5,040	.....	250	51	550	563
75	70	20	5	5	0	12	Yes.	No..	100	No..	7,300	10,000	.....	1,700	750	564
80	82	24	3	28	34	21	No..	Yes.	800	Yes.	8,300	13,000	.....	2,800	1,800	565
120	105	20	2	0	0	25	No..	No..	700	No..	.....	10,000	300	2,500	600	566
49	63	11	5	5	6	8	No..	Yes.	100	No..	40,500	62,300	250	2,303	3,800	567
43	48	25	5	10	5	25	No..	Yes.	.....	Yes.	8,100	20,000	.....	1,600	1,200	568
35	15	15	3	0	0	0	No..	No..	.....	Yes.	.....	.....	.....	400	.....	569
0	12	0	0	0	1	1	No..	No..	.....	Yes.	.....	.....	.....	299	53	570
66	46	47	4	9	26	33	Yes.	No..	535	Yes.	51,500	53,805	.....	1,993	3,883	571
49	18	18	4	0	0	0	No..	No..	200	No..	6,035	.....	750	860	.....	572
49	0	0	0	0	0	6	Yes.	No..	3,000	.....	135,000	.....	.....	.....	.....	573
0	178	....	....	....	....	90	.....	.....	7,000	.....	600	.....	.....	.....	.....	574
15	0	0	0	....	....	0	No..	Yes.	.....	.....	.....	.....	.....	.....	.....	575

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	MARYLAND—cont'd.					
576	Baltimore	The Bryn Mawr School for Girls (cor. Cathedral and Preston sts.).	Mrs. Mary Colvin, secretary.	Nonsect	1	8
577	....do	Friends' Elementary and High School.	Eli M. Lamb	Friends	6	3
578	....do	The Gymnasium School (608 North Eutaw st.).	E. Deichmann	0	8	1
579	....do	Milton Academy (714 Madison ave.).	E. Parsons		4	1
580	....do	Mount St. Joseph's College.	Brother Joseph	R. C	6	0
581	....do	Mount Vernon Institute (16 E. Mt. Vernon place).	Miss A. F. Shattuck, vice-principal.	Nonsect	2	3
582	....do	Newton Academy (1114 W. Baltimore st.).	Thomas Lester	0	2	0
583	....do	School for Boys (870 Linden ave.).	George G. Carey, A. M.	0	4	0
584	....do	Southern Home School.	Cary & Cary		3	8
585	....do	University School for Boys (1021 Calvert st.).	W. S. Marston	Nonsect	7	0
586	....do	Wilford School (909 Cathedral st.).	Mrs. Caroline Bullock.	Presb	0	3
587	Brookeville	Brookeville Academy	I. D. Warfield, A. M., president.	Nonsect	1	1
588	Cambridge	Cambridge Academy	Prof. J. F. Baugher	Nonsect	1	3
589	Charlotte Hall	Charlotte Hall School	R. W. Silvester	Nonsect	4	0
590	College of St. James.	College of St. James Grammar School.	Henry Onderdonk	P. C	3	0
591	Colora	West Nottingham Academy.	John G. Conner, A. M	Nonsect	2	0
592	Cumberland	Allegany County Academy.	J. Shiles Crockett	Nonsect	2	3
593	Easton	Friends' Select School	Miss E. Lloyd	Friends	0	2
594	Ellicott City	Maupin's University School.	Chapman Maupin, A. M	0	2	0
595	Embla	Notre Dame of Maryland.	School Sisters of Notre Dame.	R. C	4	16
596	Fallston	Oakland Boarding School.	George G. Curtiss	Nonsect	2	2
597	Frederick	Frederick College	Miss L. S. Tilton	Nonsect	3	0
598	Frederick City	St. John's Literary Institute.	James A. Ward, president.	R. C	2	0
599	McDonogh	McDonogh School	Duncan C. Lyle	0	5	0
600	North East	North East Classical Institute.	B. F. Flounders, A. M	Presb	1	1
601	Reisterstown	The Hannah More Academy.	Rev. A. J. Rich, rector	P. E	1	5
602	Rockville	Rockville Academy	C. K. Nelson, D. D	0	3	0
603	St. George	St. George's Hall for Boys.	Jas. C. Kinear	Epis	3	1
604	St. Marys City	St. Mary's Female Seminary.	Miss A. E. Thomas	Nonsect	0	3
605	Sandy Spring	Rockland School for Girls.	Henry C. Hallowell	Nonsect	1	1
606	Upper Marlboro	Upper Marlboro Academy.	Thomas J. Grant		2	0
	MASSACHUSETTS.					
607	Amherst	Mount Pleasant Institute.	Wm. K. Nash, A. M	Nonsect	1	0
608	Andover	Abbott Academy	Miss T. McKeen	Nonsect	1	5
609	....do	Phillips Academy	C. F. T. Bancroft, PH. D.	Nonsect	13	0
610	....do	Punchard Free School	F. O. Baldwin	Nonsect	2	2

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and other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	82	0	82	0	0	3	Yes.	Yes.	385	No.	.....	.....	.....	.....	.....	576
53	56	6	1	....	....	6	No.	Yes.	3,000	Yes.	$27,500	.....	.....	$16,000	.....	577
140	0	100	0	....	....	12	No.	Yes.	0	Yes.	.....	.....	.....	12,350	.....	578
35	0	5	0	10	0	0	No.	No.	.....	.....	.....	.....	.....	.....	.....	579
65	0	20	0	15	0	3	No.	Yes.	5,000	Yes.	65,050	.....	.....	11,000	.....	580
0	20	20	0	....	....	.....	No.	Yes.	400	Yes.	50,500	.....	.....	.....	.....	581
20	0	....	....	....	....	.....	No.	Yes.	0	No.	10,000	.....	.....	1,200	.....	582
40	0	....	....	....	....	3	Yes.	Yes.	0	No.	4,000	.....	.....	4,500	.....	583
0	77	....	....	....	....	.....	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	584
110	0	77	0	4	0	14	Yes	No.	0	No.	500	.....	.....	15,800	.....	585
0	20	0	1	....	....	2	Yes.	No.	125	Yes.	.....	.....	.....	.....	.....	586
20	5	1	2	1	1	0	Yes.	Yes.	500	Yes.	10,000	$600	.....	1,500	.....	587
0	35	....	....	....	....	.....	.....	.....	300	.....	12,100	.....	$500	1,000	.....	588
85	0	25	0	20	0	10	No.	Yes.	3,000	Yes.	26,200	.....	2,600	1,800	$4,200	589
22	0	12	0	....	....	4	No.	Yes.	3,000	.....	12,000	.....	.....	5,000	.....	590
45	0	1	0	3	0	1	No.	No.	200	No.	7,040	.....	500	900	.....	591
29	34	0	0	....	....	0	No.	No.	0	Yes.	11,000	.....	800	2,060	.....	592
3	5	0	0	0	0	0	Yes.	No.	40	Yes.	2,015	.....	.....	600	100	593
19	0	7	0	1	0	4	No.	Yes.	230	Yes.	11,000	.....	.....	1,320	.....	594
0	150	....	....	....	....	3	Yes.	Yes.	5,000	Yes.	303,000	.....	.....	.....	.....	595
13	9	4	3	....	....	0	Yes.	Yes.	0	Yes.	4,900	.....	.....	750	.....	596
44	0	15	0	....	....	0	No.	No.	3,000	Yes.	20,150	.....	.....	2,429	.....	597
17	0	4	0	....	....	0	No.	No.	.....	Yes.	50,000	.....	400	.....	.....	598
100	0	2	0	3	0	19	Yes.	No.	2,600	No.	129,000	708,500	.....	.....	39,135	599
16	0	3	0	2	0	8	Yes.	Yes.	500	Yes.	2,250	.....	200	800	200	600
0	65	....	....	0	0	7	Yes.	No.	600	Yes.	20,000	4,000	.....	.....	8,200	601
51	0	30	0	1	0	0	No.	No.	0	Yes.	5,000	18,000	900	1,000	.....	602
15	5	0	0	0	0	8	Yes.	Yes.	1,500	Yes.	2,000	.....	.....	5,000	.....	603
0	17	....	....	....	....	2	Yes.	Yes	.....	Yes.	10,000	.....	2,500	440	.....	604
0	30	....	....	....	....	1	No.	No.	500	.....	10,500	.....	.....	.....	.....	605
19	0	8	0	....	....	3	No.	No.	0	Yes.	.....	.....	800	.....	1,200	606
4	0	2	0	2	0	2	No.	No.	500	Yes.	30,000	.....	.....	666	.....	607
0	63	0	3	0	0	9	No.	Yes.	3,000	No.	127,500	29,745	.....	4,375	16 897	608
355	0	220	0	135	0	100	Yes.	Yes.	3,000	No.	103,000	250,000	.....	15,423	19,750	609
26	36	0	6	2	0	12	Yes.	No.	250	No.	1,000	75,005	....	0	4,622	610

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	MASSACHUSETTS—continued.					
611	Ashburnham	Cushing Academy	H. S. Cowell	0	5	3
612	Ashfield	Sanderson Academy	Miss Martha E. Hersey	Nonsect.	0	2
613	Auburndale	Riverside School (Wellesley Preparatory).	Miss D. T. Smith	Nonsect.	0	6
614	Bernardston	Powers Institute	E. L. Underwood, A. B.	Nonsect.	1	1
615	Billerica	Howe School	Samuel Tucker	Nonsect.	1	1
616	Boston	Academy of Notre Dame	Sister Mary Bernardine.	R. C	0	10
617	....do	Academy Sacred Heart	Sarah J. Randall	R. C	0	4
618	....do	Berkeley School	Taylor, DeMerritte, and Hagar.	0	7	7
619	....do	Home and Day School for Young Ladies (18 Newbury st.).	Abby H. Johnson	Nonsect.	0	6
620	....do	Misses Hubbard's School for Girls (112 Newbury st.).	Misses Hubbard	Nonsect.	0	1
621	....do	Miss Ireland's School	Miss Catharine I. Ireland.	Nonsect.	4	7
622	....do	School for Boys	Albert Hale	0	5	0
623	....do	Sears's School for Girls	Edmund H. Sears	Nonsect.	3	4
624	....do	Mr. and Miss Wesselhoeft's Home and Day School for Girls.	Mrs. Selma Wesselhoeft.		2	4
625	Bradford	Bradford Academy	George Cogswell, president.		0	6
626	Brimfield	Hitchcock Free High School.	J. M. Russell	Nonsect.	2	3
627	Cambridge	The Cambridge School for Girls (20 Mason st.)	Arthur Gilman, M. A., director.	Nonsect.	1	4
628	....do	Private School for Boy and Girls (13 Buckingham st.).	Miss K. V. Smith		1	5
629	Cambridgeport	Day and Family School for Boys.	Joshua Kendall		1	1
630	Conway	Mrs. Perry's Family School.	Mrs. H. D. Perry	0	0	2
631	Danvers	The Willard Home School.	Mrs. H. M. Merrill	0	0	6
632	Deerfield	The Deerfield Academy and Dickinson High School.	Robert H. Leland	0	1	3
633	Dorchester	Shawmut School	Miss Ella G. Ives		0	3
634	Duxbury	Partridge Academy	Geo. R. Pinkham, A. M.	Nonsect.	1	1
635	....do	Powder Point School	Fred. B. Knapp	Nonsect.	2	0
636	Easthampton	Williston Seminary	Rev. Wm. Gallagher, PH. D.	Nonsect.	7	0
637	Everett	Home School	Mrs. A. P. Potter	Bapt	1	5
638	Falmouth	Lawrence Academy and High School.	S. A. Holton	Nonsect.	1	1
639	Franklin	Dean Academy	Lester L. Burington	Univ	4	6
640	Great Barrington	Sedgwick Institute	Edw. J. Van Lennep	Nonsect.	3	0
641	Greenfield	Prospect Hill School for Young Women.	James C. Parsons	Nonsect.	1	2
642	Groton	Groton School	Rev. Endicott Peabody, LL. M.	P. E	8	0
643	....do	Lawrence Academy	A. O. Tower	Cong.	1	1
644	Hatfield	Smith Academy	S. L. Cutler	Nonsect.	1	2
645	Hingham	Derby Academy	Henry M. Wright		1	2
646	Jamaica Plain	Home and Day School	Mrs. B. W. Putnam	Nonsect.	0	4
647	Lawrence	Private School	Marcia Packard		0	2
648	Lowell	English and Classical School.	Lucy A. Hill	Epis	0	2
649	Marion	The Tabor Academy	Clark T. Howland	Cong	3	3

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
86	96	18	8	10	2	22	Yes.	No.	2,350	No.	$122,200	$103,471	$1,000	$1,623	$12,664	611
26	27	2	1	1	0	0	No.	Yes.	120	No.	11,500	3,500	5,000	20	10,000	612
0	20	0	3	0	17	10	No.	No.	800	No.	20,000	.....	.....	.....	.....	613
45	30	0	0	0	0	6	No.	No.	5,000	No.	5,600	5,000	.....	500	100	614
16	24	0	0	1	0	1	No.	No.	100	No.	6,200	25,000	.....	242	2,000	615
0	60	....	....	0	0	5	Yes.	No.	2,000	Yes.	101,000	.....	.....	.....	.....	616
0	39	0	10	0	0	0	Yes.	.....	1,600	Yes.	65,300	.....	.....	7,654	.....	617
75	25	10	11	13	0	30	Yes.	No.	4,000	Yes.	300,250	.....	.....	20,000	.....	618
0	35	....	....	....	....	.....	.....	.....	200	.....	.....	.....	.....	7,000	.....	619
0	25	....	....	....	....	6	No.	No.	500	No.	30,500	.....	.....	5,000	.....	620
0	60	0	4	0	0	16	No.	Yes.	1,000	No.	.....	.....	.....	14,680	.....	621
40	0	15	0	16	0	14	No.	No.	200	No.	12,500	.....	.....	9,000	.....	622
0	33	....	....	....	....	12	No.	No.	700	No.	200	.....	.....	5,200	.....	623
0	40	....	....	....	....	.....	No.	No.	400	Yes.	.....	.....	.....	.....	.....	624
0	152	....	....	....	....	26	.....	.....	5,050	.....	144,000	50,000	0	9,400	2,500	625
32	33	4	2	3	3	10	Yes.	No.	1,800	Yes.	12,750	86,427	.....	.....	4,544	626
0	50	0	30	....	....	.....	No.	No.	.....	Yes.	25,200	.....	.....	8,000	.....	627
4	10	5	7	2	0	2	No.	No.	.....	Yes.	.....	.....	.....	3,185	.....	628
10	0	8	0	2	0	0	No.	No.	0	No.	1,700	.....	.....	1,150	.....	629
0	20	0	20	0	0	6	No.	No.	0	.....	.....	.....	.....	.....	.....	630
0	30	0	1	0	5	2	No.	Yes.	350	Yes.	50	.....	.....	1,400	.....	631
18	29	4	3	0	0	10	Yes.	No.	3,000	No.	24,000	.....	.....	72	.....	632
0	12	0	2	....	....	.....	Yes.	.....	.....	.....	.....	.....	.....	3,000	.....	633
32	41	0	0	....	....	11	Yes.	No.	25	No.	2,550	25,000	400	75	1,250	634
8	0	0	0	5	0	3	No.	Yes.	670	No.	10,200	.....	.....	1,050	.....	635
115	5	41	5	74	0	19	Yes.	Yes.	2,500	No.	162,000	350,000	.....	7,000	16,000	636
0	25	0	10	....	....	4	Yes.	.....	200	Yes.	.....	.....	.....	2,000	.....	637
27	34	4	2	2	0	4	No.	No.	0	No.	3,200	1,000	850	175	500	638
71	80	11	12	18	0	21	No.	No.	700	Yes.	200,800	100,000	.....	3,785	5,000	639
22	0	9	0	12	0	4	Yes.	Yes.	0	No.	.....	.....	.....	.....	.....	640
0	25	0	1	0	0	13	No.	No.	300	No.	30,300	.....	.....	2,400	.....	641
51	0	46	0	....	....	5	No.	Yes.	500	No.	120,100	.....	.....	25,500	30,000	642
10	16	....	....	....	....	4	Yes.	Yes.	2,500	No.	41,000	28,000	.....	600	1,600	643
16	21	2	3	....	....	0	Yes	No.	300	No.	32,000	53,000	.....	172	3,200	644
13	32	3	1	2	0	3	Yes.	No.	.....	Yes.	5,000	28,327	.....	606	1,654	645
7	17	2	0	....	....	2	Yes.	No.	100	Yes.	.....	.....	.....	1,500	.....	646
0	10	0	0	0	0	0	Yes.	No.	100	Yes.	6,000	.....	.....	.....	.....	647
0	8	....	....	....	....	.....	.....	No.	500	No.	8,200	.....	.....	900	.....	648
37	56	12	7	4	4	4	Yes.	No.	350	No.	25,500	291,000	.....	400	15,000	649

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	MASSACHUSETTS—continued.					
650	Middleboro	Eaton School	Amos H. Eaton	Nonsect.	1	2
651	Milton	Milton Academy	Harrison O. Apthorp	Nonsect.	3	3
652	Monson	Monson Academy	D. M. Dustan	Nonsect.	2	2
653	Mount Hermon	Boys' School	Henry E. Sawyer	Nonsect.	4	4
654	Nantucket	Admiral Sir Isaac Coffin's Lancasterian School.	Edmund B. Fox	0	1	2
655	New Bedford	Friends' Academy	Thomas H. Eckfeldt	0	1	4
656	New Salem	New Salem Academy	H. N. Durham	Nonsect.	1	1
657	Newton	Cutler's Preparatory School.	Edw. H. Cutler	Nonsect.	1	1
658	Norfolk	Higher Grade School	Miss Annie C. Hitchcock.		1	1
659	Northampton	Classical School for Girls.	B. T. Capin	Nonsect.	3	10
660	Norton	Wheaton Female Seminary.	Miss A. Earn Stanton	Cong	2	9
661	Plymouth	Home School for Boys	Mrs. F. N. Knapp		1	1
662	Quincy	Adams Academy	Wm. Everett	Nonsect.	5	0
663	Roxbury	Notre Dame Academy	Sister Aloyse	R. C	0	6
664	do	Private School	Elizabeth Curtis		1	1
665	Shelbourne Falls	Arms Academy	F. A. Tupper	Nonsect.	2	2
666	Southborough	St. Mark's School	Wm. E. Peck	P. E	6	0
667	South Braintree	The Thayer Academy	J. B. Sewall	Nonsect.	6	1
668	South Bayfield	Dummer Academy	John W. Perkins	Nonsect.	4	1
669	South Lancaster	South Lancaster Academy.	G. W. Caviness, A. M	7 Day Ad	1	2
670	Springfield	Preparatory School for College.	Henry L. Coar	Nonsect.	1	0
671	Taunton	Bristol Academy	Wm. F. Palmer	Nonsect.	3	3
672	Wellesley	Dana Hall Preparatory School.	Sarah P. Eastman, Julia A. Eastman.	Nonsect.	0	13
673	West Bridgewater	Howard Seminary	Emma O. Conro		1	4
674	Westford	Westford Academy	Wm. E. Frost	Nonsect.	1	1
675	West Newton	English and Classical School.	Nath'l T. Allen	Nonsect.	2	2
676	Wilbraham	Wesleyan Academy	Rev. Geo. M. Steele, D. D., LL.D.	M. E	7	6
677	Worcester	The Highland Military Academy.	Joseph A. Shaw	P. E	4	0
678	do	The Worcester Academy.	D. W. Abercrombie, A. M.	Bapt	7	0
	MICHIGAN.					
679	Adrian	Raisin Valley Seminary.	F. R. Hathaway	Friends	2	1
680	Detroit	The Detroit Seminary	Miss Annie M. Cutcheon, Miss H. B. Pope.		2	2
681	Grand Haven	Akeley Institute for Girls.	Mrs. James C. Wilkinson.	Epis	1	3
682	Kalamazoo	Michigan Female Seminary.	Miss I. G. French	Presb	0	4
683	Marshall	St. Mary's Academy	Rev. P. A. Baart, S. T. L.	R. C	1	4
684	Marquette	St. Joseph's Academy	Sister M. De Pazzi	R. C	0	2
685	Monroe	St. Mary's Academy	Mother M. Clotilda	R. C	0	2
686	Orchard Lake	Michigan Military Academy.	W. H. Butts	Nonsect.	7	0
687	Owosso	Oakside School	Mrs. L. E. Gould	Nonsect.	0	2
688	Port Huron	Academy of the Sacred Heart.	Sister Superior	R. C	0	3
689	Spring Arbor	Spring Arbor Seminary.	Rev. A. H. Stillwell, A. M.	Meth	4	2
	MINNESOTA.					
690	Albert Lea	Lutheran High School	L. S. Swenson	Luth	3	1

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
25	13	0	1	0	0	5	Yes.	No..	5,000	Yes.	$8,000	.....	.....	$3,000	.....	650
30	18	30	18	....	....	0	No..	Yes.	500	Yes.	50,200	$75,000	.....	9,800	$2,675	651
50	25	10	0	5	0	15	No..	No..	1,500	No..	40,800	30,000	.....	2,004	6,500	652
251	0	0	0	0	0	13	No..	No..	2,800	Yes.	234,220	62,090	0	24,454	35,449	653
30	35	1	1	1	0	12	No..	No..	1,500	No..	11,000	42,000	.....	560	2,100	654
10	34	5	2	....	....	2	No..	Yes.	1,000	No..	10,300	.....	.....	4,900	.....	655
21	18	1	1	0	0	0	No..	No..	.....	Yes.	9,150	3,500	.....	.....	175	656
21	2	17	0	6	0	10	No..	No..	0	Yes.	.....	.....	.....	.....	.....	657
9	15	0	0	0	0	8	No..	No..	0	.....	2,505	.....	.....	.....	.....	658
0	105	0	12	0	23	22	No..	Yes.	2,500	No..	500	.....	.....	.....	.....	659
0	65	....	....	....	....	7	Yes.	Yes.	600	Yes.	.....	.....	.....	.....	.....	660
6	0	1	0	2	0	0	Yes.	Yes.	.....	.....	.....	.....	.....	.....	.....	661
48	0	48	0	....	....	9	No..	Yes.	1,200	Yes.	.....	.....	.....	.....	.....	662
0	46	0	0	....	....	4	Yes.	No..	.....	Yes.	.....	.....	.....	.....	.....	663
0	17	0	8	0	0	0	No..	No..	.....	Yes.	500	.....	.....	.....	.....	664
47	57	8	2	1	0	8	No..	No..	105	No..	17,612	29,000	.....	.....	3,043	665
72	0	65	0	5	0	11	No..	Yes.	1,500	No..	20,850	.....	.....	43,200	.....	666
43	74	9	8	15	0	22	Yes.	No..	520	No..	100,500	250,000	.....	1,188	12,000	667
34	0	21	0	13	0	7	No..	Yes.	500	Yes.	15,000	20,000	.....	3,000	1,200	668
30	20	12	8	10	6	3	No..	Yes.	300	Yes.	30,000	.....	.....	2,000	.....	669
11	0	1	0	2	0	0	No..	No..	.....	No..	.....	.....	.....	.....	.....	670
59	44	26	12	16	2	11	No..	No..	.....	.....	.....	.....	.....	.....	4,000	671
0	101	0	13	0	73	23	No..	Yes.	.....	No..	.....	.....	.....	.....	.....	672
0	20	....	1	0	4	3	Yes.	Yes.	.....	Yes.	100,500	.....	.....	2,600	3,550	673
22	24	4	6	5	0	6	Yes.	No..	150	No..	4,100	45,000	.....	850	2,000	674
20	16	8	4	14	1	10	Yes.	Yes.	2,500	Yes.	30,500	.....	.....	21,000	.....	675
190	110	25	6	10	12	21	Yes.	Yes.	5,000	No..	128,681	15,000	.....	11,000	3,990	676
50	0	2	0	6	0	2	Yes.	No..	700	Yes.	31,000	.....	.....	.....	.....	677
145	3	80	0	25	0	30	No..	Yes.	1,500	No..	180,600	80,000	.....	4,500	29,500	678
47	44	3	4	8	10	6	No..	No..	500	No..	25,200	20,000	.....	1,400	1,300	679
0	35	0	1	....	....	4	No..	No..	100	Yes.	.....	.....	.....	9,375	.....	680
0	23	....	....	....	....	0	Yes.	Yes.	300	Yes.	50,300	.....	.....	8,000	.....	681
0	50	0	0	0	2	5	No..	Yes.	1,738	No..	51,000	24,424	.....	10,722	1,506	682
0	48	0	0	0	0	.....	Yes.	No..	400	Yes.	16,000	.....	.....	2,000	.....	683
2	20	0	0	0	0	.....	.....	No..	300	Yes.	40,000	.....	.....	.....	.....	684
0	40	....	....	0	0	5	Yes.	No..	2,300	Yes.	82,423	.....	.....	14,550	.....	685
142	0	14	0	50	0	19	No..	Yes.	2,000	Yes.	101,000	.....	.....	.....	.....	686
17	39	1	1	18	0	0	No..	No..	300	No..	4,000	.....	.....	525	.....	687
0	37	0	0	0	0	5	Yes.	No..	700	Yes.	12,500	.....	.....	1,000	.....	688
55	53	1	0	....	....	0	No..	No..	400	Yes.	12,000	.....	.....	.....	.....	689
79	66	....	....	....	....	5	.....	No..	100	No..	25,075	.....	.....	24,000	.....	690

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	MINNESOTA—c't'd.					
691	Austin	St. Catherine's Convent School.	Rev. D. O. Sullivan	R. C	0	1
692	Faribault	Bethlehem Academy	Dominican Sister	R. C	0	2
693	....do	St. Mary's Hall	Miss E. F. Lawrence	P. E	1	6
694	....do	Shattuck School	Rev. James Dobbin, D. D., rector.	P. E	9	0
695	Minneapolis	Minneapolis Academy	E. D. Holmes	Nonsect	3	3
696	Montevideo	The Western Minnesota Seminary.	C. W. Headley		1	2
697	Moorhead	Hope Academy	S. A. Challman, A. M	Luth	3	1
698	Owatonna	Pillsbury Academy	James W. Ford	Bapt	3	2
699	Red Wing	Seminary and College	H. H. Bergsland	Luth	6	0
700	St. Joseph	St. Benedict's Academy	Sister Pius	R. C	0	2
701	St. Paul	Baldwin Seminary	Clinton J. Backus	Nonsect	1	3
702	St. Paul	The Barnard School (boys).	Wm. F. Hunt	0	4	0
703	St. Peter	Gustavus Adolphus College.	M. Wahlstrom, president.	Luth	13	0
704	Waseca	Academy of the Holy Child Jesus.	Mother Superior	R. C	0	5
705	Wasioja	Wesleyan Methodist Seminary of Minnesota.	Paul F. Ela	Meth	1	1
706	Willmar	The Minnesota Lutheran Seminary and Institute.	H. S. Hilleboe	Luth	4	2
	MISSISSIPPI.					
707	Ackerman	Normal High School	F. M. McAlister	0	1	4
708	Ashland	Ashland Academy	N. J. Darden	Nonsect	1	1
709	Beth Eden	Collegiate Institute	Rev. J. R. Howorth, A. B., president.	Luth	1	2
710	Booneville	Booneville Institute	J. C. Bryson, B. S		1	4
711	Brandon	Female College	Miss F. A. Johnson	Nonsect	0	3
712	Buena Vista	Normal College	W. S. Burks		3	0
713	Byhalia	Kate Tucker Institute	Miss Kate E. Tucker	0	1	3
714	Canton	Mrs. Draine's School	Misses George and Amelia Drane.	0	0	4
715	Carrollton	Female College	Z. T. Leavell	Bapt	1	3
716	Chester	Normal High School	J. P. Gee	Nonsect	1	1
717	Clinton	Mount Hermon Female Seminary.	Miss S. A. Dickey	Nonsect	0	2
718	Columbia	High School	W. W. Rivers		1	0
719	Conehatta	Conehatta Institute	Rev. A. M. M. Boyde and J. S. Scott.		3	2
720	Corinth	Female College	Miss W. Lena Elgin	Nonsect	2	3
721	Decatur	High School	R. L. Bullard	Nonsect	2	1
722	Duck Hill	Male and Female Academy.	N. W. Sanderson		1	1
723	Fayette	Fayette Academy	Miss Kate Wharton	Presb	0	3
724	French Camp	Central Mississippi Institute.	J. A. Sanderson	Presb	2	3
725	Grenada	Collegiate Institute	Rev. Thos. J. Newell, A. M.	M. E. So	1	5
726	Hamlet	Jasper Normal High School.	S. T. King, A. B	0	1	0
727	Handsborough	Gulf Coast College	Mrs. W. G. Henderson	Nonsect	0	2
727	Hebron	High School	F. L. Riley	Nonsect	1	2
728	Holly Springs	Bethlehem Academy	Sister Flavia	R. C	0	4
730	....do	Maury Institute	Miss E. D. Watson	Nonsect	0	6
731	Houston	Mississippi Normal College.	H. B. Abernethy, president.		2	2
732	Kilmichael	Normal School	W. N. Lewis	Nonsect	1	1

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and other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	5	0	0	0	0	0	No..	No..	0	Yes.	$4,000	.....	.....	$240	.....	691
0	20	0	0	0	0	1	Yes.	No..	300	Yes.	17,100	.....	.....	.....	.....	692
0	66	0	0	0	0	5	No..	Yes.	1,600	Yes.	120,000	.....	.....	.....	.....	693
142	0	11	0	45	0	29	Yes.	Yes.	1,500	Yes.	250,000	$15,000	.....	.....	$1,050	694
77	16	30	6	55	2	27	Yes.	Yes.	600	Yes.	35,150	.....	.....	4,500	560	695
25	20	5	3	2	2	1	No..	No..	125	Yes.	25,000	.....	.....	1,300	4,000	696
40	17	7	5	2	4	0	No..	No..	262	Yes.	18,042	.....	.....	2,500	2,000	697
36	35	10	5	20	0	14	No..	Yes.	1,200	No..	80,000	85,000	.....	3,000	8,000	698
127	0	.....	.....	.....	.....	3	No..	No..	700	No..	20,000	.....	.....	.....	.....	699
0	27	.....	.....	.....	.....	2	.....	.....	1,200	Yes.	20,000	.....	.....	.....	.....	700
40	25	2	5	3	8	6	No..	No..	500	Yes.	18,200	.....	.....	8,000	.....	701
20	0	.....	.....	.....	.....	4	Yes.	No..	300	Yes.	200	.....	.....	4,200	.....	702
107	36	.....	.....	.....	.....	15	No..	Yes.	5,000	No..	50,700	.....	.....	4,000	.....	703
0	50	.....	.....	.....	.....	7	No..	No..	380	Yes.	.....	.....	.....	.....	.....	704
7	9	2	0	2	1	0	No..	No..	600	Yes.	50	.....	.....	.....	.....	705
188	98	4	0	3	0	24	No..	No..	400	.....	10,050	.....	.....	3,500	.....	706
53	100	40	27	30	25	0	No..	No..	30	Yes.	2,700	.....	.....	1,400	.....	707
7	9	0	0	2	2	0	No..	No..	0	Yes.	800	.....	$320	430	.....	708
12	10	6	4	0	0	0	No..	No..	500	Yes.	600	.....	200	350	.....	709
22	29	3	3	0	0	5	No..	No..	500	Yes.	10,000	.....	600	1,100	.....	710
0	19	0	0	0	0	2	No..	No..	100	Yes.	5,256	.....	0	380	720	711
20	15	8	3	5	2	6	No..	No..	300	Yes.	3,000	.....	.....	3,500	.....	712
10	28	2	4	10	22	3	Yes.	No..	.....	Yes.	10,000	.....	450	450	.....	713
24	18	9	6	2	0	2	No..	No..	.....	Yes.	1,300	.....	.....	.....	.....	714
0	40	.....	.....	.....	.....	0	No..	No..	500	Yes.	5,050	.....	200	600	.....	715
18	22	.....	.....	10	6	0	No..	Yes.	50	Yes.	600	.....	300	1,000	.....	716
4	19	.....	.....	.....	1	1	.....	.....	400	Yes.	25,000	.....	445	.....	1,300	717
15	6	0	0	5	3	0	No..	No..	.....	.....	2,030	.....	500	2,500	.....	718
45	53	4	6	20	30	6	No..	No..	100	Yes.	2,700	.....	500	1,900	.....	719
0	75	.....	.....	0	25	3	Yes.	.....	.....	Yes.	5,000	.....	450	2,000	.....	720
20	19	13	8	8	10	3	.....	No..	300	Yes.	1,950	.....	460	3,100	150	721
5	7	.....	.....	.....	.....	.....	No..	No..	0	Yes.	800	.....	300	700	.....	722
2	42	.....	.....	0	0	0	No..	No..	150	Yes.	15,000	.....	.....	.....	.....	723
0	65	0	65	0	0	6	Yes.	No..	500	Yes	7,520	.....	.....	1,700	500	724
2	80	2	36	0	44	6	No..	Yes.	160	Yes.	30,150	.....	.....	3,460	.....	725
25	15	.....	.....	15	12	0	.....	.....	400	Yes.	1,000	.....	350	1,200	.....	726
11	12	.....	.....	.....	.....	0	No..	No..	.....	Yes	4,625	.....	.....	.....	.....	727
18	23	7	8	11	13	0	No..	No..	500	Yes.	3,075	.....	.....	.....	.....	728
10	46	.....	.....	.....	.....	7	No..	No..	700	Yes.	15,700	.....	.....	5,250	.....	729
0	35	0	38	0	0	6	Yes.	Yes.	0	Yes.	15,000	.....	.....	1,600	.....	730
50	45	6	10	27	24	10	No..	No..	500	.....	1,400	.....	.....	5,050	.....	731
18	23	5	2	4	1	0	No..	No..	100	Yes.	2,020	1,000	280	650	1,000	732

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	MISSISSIPPI—c't'd.					
733	Liberty	Male and Female College.	P. L. Marsalis	Nonsect	2	2
734	Louisville	Louisville Normal	D. A. McIntosh	Nonsect	1	2
735	Meridian	Meridian Academy	J. H. Brooks	M. E	1	1
736	....do	Meridian Normal College.	Vance & Johnston		3	0
737	Oxford	Warren Female Institute.	Mrs. C. A. Lancaster	Bapt	0	2
738	Pass Christian	Pass Christian Institute	H. C. Mayer (Rev.)	Epis	0	2
739	Pittsborough	Male and Female College.	J. S. Hudson, M. S	Nonsect	1	3
740	Pleasant Ridge	Pleasant Ridge Normal.	T. L. Gates	Meth	3	1
741	Port Gibson	Chamberlain-Hunt Academy.	W. C. Guthrie	Presb	5	0
742	Potts Camp	Reid Institute	Miss Maggie Tate	Nonsect	0	2
743	Ripley	Male and Female College.	Smith & Walker	0	2	1
744	Shuqualak	Male High School	R. D. Jamison	0	1	0
745	Slate Springs	Collegiate Institute	John J. Huggins	0	3	1
746	Sylvarena	High School	W. S. Huddleston	Nonsect	3	1
747	Winona	Female College	J. P. Zealy, D. D	0	1	4
	MISSOURI.					
748	Appleton City	Appleton City Academy	G. A. Theilman	Nonsect	3	4
749	Arcadia	Ursuline Academy	Mother Marian	R. C	0	6
750	Ashley	Watson Seminary	J. H. Piper	Nonsect	2	3
751	Aurora Springs	High School	Nathan A. Whitmer		2	1
752	Boonville	Cooper Institute	Anthony Haynes	0	1	2
753	....do	The Kemper Family School.	T. A. Johnston, M. A	Nonsect	3	1
754	Brashear	Brashear Academy	J. S. Bailey	0	1	1
755	Brookfield	Brookfield Academy	Duncan Brown, president.	Presb	6	5
756	Butler	Butler Academy	J. McC. Martin	Presb	2	1
757	Cameron	Missouri Wesleyan College.	John W. Huston, president.	M. E	9	6
758	....do	Mrs. Tierman's Home School.	Mrs. S. B. Tierman		1	1
759	Chillicothe	St. Joseph's Academy	Sister Seraphine	R. C	0	6
760	Clarence	Macon District High School.	Rev. J. D. Shultz	M. E. So	2	5
761	Clarksburg	Clarksburg College	L. R. Wilfley	0	4	0
762	....do	Hooper Institute	J. N. Hooper	Nonsect	3	0
763	Clinton	Clinton Academy	E. P. Lampkin, A. M	Nonsect	4	4
764	College Mound	McGee College	J. C. Horn	M. E	2	4
765	Concordia	St. Paul's College	J. H. Kaeppel	Luth	6	0
766	Eldon	Eldon Academy	John Vetter	Cong	2	1
767	Gravelton	Concordia College	Rev. L. M. Wagner, A. M	0	2	0
768	Greenfield	Ozark College	E. Allen Frost	Presb	2	4
769	Green Ridge	Green Ridge College	M. E. Moore	Nonsect	1	2
770	Holden	St. Cecelia's Seminary	Sister of Charity	R. C	0	8
771	Houston	Houston Institute	C. W. White, A. M		2	3
772	Humphreys	Humphrey's College and Business Institute.	G. A. Smith, PH. D		4	3
773	Independence	Woodland College	Geo. S. Bryant	Christian	2	3
774	Kansas City	Educational Institute	C. G. Rathmann	0	3	0
775	Kidder	Kidder Institute	G. W. Shaw, A. M	Cong	4	4
776	Lexington	Wentworth Military Institute.	Sanford Sellers	Nonsect	5	2
777	Linn	St. George's Institute	A. Happe	R. C	0	4
778	Louisiana	McCune College	B. J. Beeson	Bapt	2	3
779	Macon	St. Agnes Hall	Mrs. L. A. Smith		0	2

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id other private secondary schools for 1889-90—Continued.

Students in econdary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
30	35	----	----	----	----	0	No..	No..	0	Yes.	$4,000	.....	$400	$1,280	$25	733
7	30	1	1	5	8	0	No..	No..	300	Yes.	2,000	.....	500	23	25	734
42	53	5	1	29	60	----	----	----	12	Yes.	3,000	.....	----	----	.....	735
25	30	----	----	6	8	10	No..	No..	300	Yes.	2,500	.....	315	1,500	.....	736
9	5	3	0	0	0	0	No..	No..	0	Yes.	7,000	.....	.....	3,000	.....	737
0	20	----	----	----	----	6	No..	No..	500	Yes.	17,000	.....	----	----	.....	738
20	25	4	10	0	0	3	No..	No..	0	Yes.	2,000	.....	600	1,200	.....	739
28	17	----	----	----	----	0	No..	Yes.	250	Yes.	4,000	.....	600	700	.....	740
80	0	25	0	0	0	2	No..	No..	2,000	Yes	30,030	$40,000	.....	2,500	4,000	741
10	15	----	----	----	----	0	No..	No..	.....	Yes.	1,503	.....	----	----	.....	742
25	21	----	----	----	----	0	No..	No..	.....	Yes.	4,000	.....	----	----	.....	743
19	0	----	----	----	----	0	No..	No..	0	Yes.	2,000	.....	200	520	.....	744
20	54	1	2	4	6	0	No..	No..	16	Yes.	1,500	.....	----	800	160	745
20	28	6	3	4	6	0	No.	No.	650	Yes.	1,040	.....	350	1,680	.....	746
0	128	0	73	----	----	3	No..	No..	50	Yes.	2,035	.....	.....	2,500	.....	747
40	35	5	6	20	10	3	No..	No..	0	Yes.	2,125	.....	.....	3,000	.....	748
0	37	0	8	----	----	1	----	----	1,000	.....	25,300	.....	.....	1,300	.....	749
15	20	14	12	6	3	3	No..	Yes.	675	Yes.	5,400	10,000	.....	800	800	750
30	22	20	15	----	----	5	No..	Yes.	300	Yes.	3,050	1,000	237	9	709	751
20	25	8	10	----	----	4	No..	No..	500	Yes.	8,300	.....	.....	2,500	.....	752
30	0	----	----	----	----	2	Yes.	Yes.	1,500	Yes.	40,500	.....	.....	6,100	.....	753
45	50	----	----	----	----	0	No..	No..	300	No..	2,500	.....	330	180	40	754
67	69	21	15	16	17	4	No..	No..	400	Yes.	15,500	.....	.....	2,800	600	755
46	47	----	----	2	10	0	No..	No..	170	No..	9,500	.....	.....	1,360	500	756
110	100	20	10	15	8	10	No..	No..	400	Yes.	30,500	.....	.....	5,000	.....	757
13	20	4	2	----	----	2	No..	No..	0	Yes.	2,000	.....	.....	.....	.....	758
0	42	----	----	----	----	0	No..	No..	0	Yes.	.....	.....	.....	.....	.....	759
45	50	20	30	----	----	0	No..	No..	200	Yes.	11,400	.....	.....	35,000	.....	760
65	50	----	----	----	----	----	No..	No..	600	No..	5,000	.....	.....	.....	.....	761
25	15	0	0	8	2	11	No..	No..	1,000	Yes.	6,300	.....	.....	.....	.....	762
27	18	16	5	9	5	7	No..	No..	0	Yes.	4,100	.....	.....	3,000	.....	763
21	19	2	2	----	----	1	No..	No..	0	Yes.	15,000	.....	400	1,150	589	764
80	0	----	----	----	----	6	Yes.	Yes.	200	.....	12,000	.....	.....	250	2,000	765
30	32	0	0	6	9	----	No..	No..	0	No..	2,100	.....	.....	850	.....	766
61	60	----	----	----	----	----	No..	Yes.	0	Yes.	2,000	.....	.....	.....	.....	767
47	63	30	20	30	0	8	No..	No..	500	Yes.	1,200	.....	.....	2,800	600	768
20	10	----	----	----	----	3	No..	No..	100	Yes.	3,610	.....	.....	.....	.....	769
40	75	30	35	----	----	----	No..	Yes.	.....	Yes.	25,000	.....	.....	.....	.....	770
62	43	23	4	0	0	29	Yes.	No..	1,000	.....	4,500	.....	1,200	1,800	.....	771
75	75	----	----	----	----	22	No..	No..	100	.....	6,000	.....	.....	.....	.....	772
40	80	----	----	----	----	9	No..	No..	1,200	Yes.	16,000	.....	.....	.....	.....	773
11	5	11	5	----	----	0	Yes.	Yes.	110	Yes.	25,050	.....	.....	4,000	.....	774
71	91	30	0	30	0	3	No..	No..	1,200	No..	20,200	.....	.....	2,068	721	775
60	0	12	0	20	0	11	No..	Yes.	200	Yes.	16,050	.....	.....	4,500	8,000	776
24	16	----	----	----	----	10	Yes.	No..	600	Yes.	700	.....	.....	.....	.....	777
28	29	4	4	----	----	2	No..	Yes.	300	Yes.	6,050	.....	.....	1,105	.....	778
0	15	----	----	1	0	0	No..	No..	100	Yes.	5,000	.....	.....	2,000	.....	779

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TABLE 9.—*Statistics of endowed academies, seminaries*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors: Male.	Female.
	1	2	3	4	5	6
	MISSOURI—cont'd.					
780	Macon	St. James Military Academy.	C. G. Davis (Rev.)	P. E	4	0
781	Marble Hill	Mayfield Smith Academy.	Miss. Jane R. Parke	Bapt	1	2
782	Marionville	Collegiate Institute	John Tunentine	M. E	3	5
783	Mill Spring	Hale's College	W. H. Hale		2	0
784	Mount Vernon	Mt. Vernon Academy	B. D. Rowlee	Presb	9	3
785	Nevada	Christian University	Joseph F. Woolery	Christian	7	4
786	do	Cottery College	V. A. C. Stockardt	Nonsect	0	4
787	Odessa	Odessa College	W. N. Grube, A. M	0	2	1
788	Olney	Olney Institute	W. F. Weltry	Nonsect	2	3
789	Otterville	Otterville College	J. V. Curlin	Nonsect	3	1
790	Paynesville	Pritchett Institute	W. H. Pritchett, A. M.	Nonsect	5	5
791	Philadelphia	High School	Miss Dora Fletcher		0	1
792	Pierce City	Baptist College	J. M. Bent, reporting officer.	Bapt	2	3
793	Plattsburg	Plattsburg College	J. W. Ellis, president	0	3	3
794	St. Charles	Sacred Heart Academy	R. Conway	R. C	0	8
795	St. Joseph	Academy of the Sacred Heart.	Madam A. M. Niederkorn.	R. C	0	9
796	do	Young Ladies' Institute	Rev. Charles Martin	Nonsect	1	6
797	St. Louis	Educational Institute	J. Toensfeldt	0	7	9
798	do	Hosmer Hall	Ciara G. Shepard and M. H. Mathews	Nonsect	0	5
799	do	Loretta Academy	Mother Austin	R. C	0	2
800	do	Mary Institute	James H. Dillard	0	1	7
801	do	The School of the Good Shepherd.	Sister Catherine	P. E	1	6
802	do	Smith Academy	Denham Arnold	Nonsect	13	7
803	do	Walther College	A. C. Burgdorf, president.	Luth	2	0
804	Sedalia	Seminary for Girls	Mrs. R. T. Miller	Presb	2	2
805	Sedgewickville	Sedgewickville Academy.	E. Miller	Nonsect	2	1
806	Sparta	Private Normal School.	J. M. Johnson, president.		2	1
807	Spring Garden	Miller County Institute.	H. M. Sutton	0	2	3
808	Sweet Springs	Sweet Springs Academy.	J. E. Barnett	0	2	2
809	Versailles	Male and Female Institute.	F. Gwynn	0	1	0
810	Washington	High School	B. J. Specking	Nonsect	2	2
811	Weaubleau	Christian Institute	John Whitaker	Christian	2	1
	MONTANA.					
812	Bozeman	Bozeman Academy	William W. Wylie	Presb	1	2
813	Miles City	Ursuline Convent of the Sacred Heart.	Ursuline Sisters	R. C	0	4
	NEBRASKA.					
814	Beatrice	Blake School	Henry N. Blake		1	1
815	Central City	North Nebraska Conference Seminary.	Rev. F. W. Ware, president.	Meth	2	2
816	Chadron	The Chadron Academy	Frank L. Ferguson	Cong	1	1
817	Columbus	St. Francis Academy and Parochial School.	Sister M. Josepha	R. C	0	2
818	Franklin	Franklin Academy	Alexis C. Hart, A. M	Cong	5	5
819	Hastings	Hastings College	Rev. W. F. Ringland, A. M., president.	Presb	5	4
820	Nebraska City	The Academy	M. F. Carey (Rev.)	0	2	1
821	Omaha	Academy of the Sacred Heart.	Madame Dunne	R. C	0	7
822	do	Brownell Hall	Robetr Doherty, S. T. D.	P. E	2	10

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nd other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
38	0	20	0	15	0	5	No..	Yes.	.....	Yes.	$12,000	.....	.....	$10,000	.....	780
20	15	....	....	....	....	.....	No..	No..	0	Yes.	12,000	.....	.....	5,000	.....	781
71	43	4	0	4	0	4	No..	No..	600	No..	8,100	.....	.....	1,975	$325	782
16	19	7	8	7	8	17	Yes.	No..	0	Yes.	1,500	.....	.....	500	1,135	783
23	19	7	5	12	18	0	No..	No..	0	Yes.	8,000	.....	.....	1,600	.....	784
....	....	....	....	....	....	2	No..	No..	1,000	Yes.	100,000	.....	.....	.....	.....	785
0	40	0	40	....	....	6	No.	Yes.	400	Yes.	30,100	.....	.....	3,500	.....	786
17	14	10	3	....	....	12	No..	No..	100	Yes.	6,050	.....	.....	2,250	.....	787
28	25	0	0	....	....	0	No..	No..	91	Yes.	3,000	.....	.....	1,200	.....	788
55	50	0	0	20	10	9	No..	No..	200	Yes.	4,150	.....	.....	1,900	.....	789
36	45	22	28	10	10	6	No..	Yes.	1,000	Yes.	10,500	$3,000	.....	3,000	3,000	790
9	9	5	3	1	0	.....	No..	No..	.....	No..	2,550	.....	.....	.....	.....	791
20	20	....	....	....	....	.....	No..	No..	.....	Yes.	12,000	.....	.....	.....	.....	792
26	15	1	2	25	13	3	No..	No..	2,000	Yes.	10,200	.....	.....	3,000	.....	793
0	50	0	0	....	....	5	No..	No..	1,200	Yes.	50,700	.....	.....	6,000	.....	794
0	51	0	0	....	....	12	No..	Yes.	1,500	Yes.	.....	.....	.....	.....	.....	795
0	57	....	....	....	....	9	No..	.....	150	Yes.	30,200	.....	.....	7,000	.....	796
62	0	8	0	....	....	7	Yes.	Yes.	500	Yes.	32,500	.....	.....	14,300	.....	797
0	60	0	2	0	6	7	No..	No..	300	Yes.	.....	.....	.....	.....	.....	798
0	20	0	0	0	10	0	No..	No..	500	Yes.	75,250	.....	.....	6,000	.....	799
0	220	....	....	....	....	17	Yes.	Yes.	750	.....	.....	.....	.....	.....	.....	800
0	45	0	0	0	0	7	No..	No..	1,000	Yes.	400	.....	.....	.....	.....	801
233	0	34	0	23	0	13	Yes.	Yes.	.....	Yes.	76,200	.....	.....	.....	.....	802
74	0	38	0	29	0	15	No..	Yes.	150	No..	50,125	.....	.....	2,021	503	803
0	15	0	3	0	10	3	Yes.	No..	700	Yes.	9,050	.....	.....	2,500	.....	804
10	1	....	....	5	0	0	No..	No..	0	Yes.	400	.....	.....	.....	.....	805
48	40	0	0	20	18	0	No..	No..	325	.....	1,650	.....	.....	650	.....	806
35	28	2	0	5	3	1	No..	No..	0	Yes.	3,000	.....	.....	1,000	.....	807
12	14	0	0	0	0	0	No..	No..	0	Yes.	2,500	.....	.....	800	100	808
7	6	....	....	....	....	0	No..	No..	.....	Yes.	3,800	.....	.....	2,000	.....	809
13	15	1	0	3	0	4	Yes.	No..	.....	Yes.	10,300	.....	.....	1,475	.....	810
29	32	....	....	46	12	1	No..	No..	100	Yes.	3,100	.....	.....	1,300	.....	811
23	15	1	3	....	....	0	No..	No..	200	Yes.	4,000	.....	.....	1,600	1,000	812
0	20	0	10	0	8	0	Yes.	.....	50	Yes.	10,000	.....	.....	.....	.....	813
17	23	....	4	....	....	.....	Yes.	No..	400	Yes.	4,000	.....	.....	2,500	.....	814
12	8	8	4	8	0	3	No..	No..	225	No..	50,000	5,000	.....	1,200	1,350	815
20	12	10	6	8	6	0	Yes.	No..	.....	Yes.	30,000	.....	.....	600	2,000	816
1	23	....	....	....	....	.....	Yes.	.....	100	Yes.	15,000	.....	.....	135	.....	817
49	22	17	3	10	4	6	Yes.	No..	1,900	No..	16,006	2,500	.....	1,250	3,500	818
40	47	20	20	19	27	4	No..	No..	2,000	Yes.	60,150	15,000	.....	2,675	29,000	819
25	15	....	....	....	....	.....	.....	.....	25	.....	5,030	.....	.....	2,500	.....	820
0	60	0	35	0	0	12	No..	No..	1,800	Yes.	100,500	.....	.....	.....	.....	821
0	72	0	4	....	....	7	Yes.	No..	3,000	Yes.	131,000	.....	.....	996	2	822

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TABLE 9.—*Statistics of endowed academies, seminaries*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of students and pupils in the institution	
					Male.	
	1	2	3	4	5	6
	NEBRASKA—cont'd.					
823	Omaha	St. Catherine's Academy.	Sisters of Mercy	R. C	0	
824	Pawnee City	Pawnee City Academy	Miss M. E. Campbell	Presb	0	
825	Plattsmouth	St. John's Parochial School.	Mother M. Alphonso	R. C	0	
826	Wahoo	Luther Academy	S. M. Hill, A. M	Ev. Luth	4	
827	Weeping Water	Weeping Water Academy.	George Hindley	Cong	4	
	NEVADA.					
828	Reno	The Bishop Whitaker School for Girls.	Miss Julia Megquier	Epis	1	
	NEW HAMPSHIRE.					
829	Atkinson	Atkinson Academy	Freeman B. Rice	Cong	1	
830	Canterbury	Kezer Seminary	W. E. Conant		1	
831	Concord	St. Mary's School	Miss E. M. M. Gainforth	P. E	1	
832	do	St. Paul's School	Rev. Henry A. Coit	P. E	23	
833	Derry	Pinkerton Academy	G. W. Bingham	Nonsect	3	
834	Epping	Watson Academy	Asher Starkweather	Nonsect	1	
835	Exeter	Phillips Exeter Academy.	G. A. Wentworth, acting principal.	Nonsect	13	
836	do	Robinson Female Seminary.	George N. Cross, A. M	Nonsect	2	
837	Francestown	Francestown Academy	Chas. S. Paige	Nonsect	3	
838	Gilmanton	Gilmanton Academy	Sam. W. Robertson	Nonsect	2	
839	Haverhill	Haverhill Academy	Ed. S. Boyd		1	
840	Kingston	Sanborn Seminary	Chas. H. Clark	Nonsect	0	
841	Lancaster	Lancaster Academy	D. T. Tumberlake		1	
842	Meriden	Kimball Union Academy.	D. G. Miller	Cong	2	
843	Mount Vernon	McCollom Institute	Oscar D. Davis	Nonsect	1	
844	New Hampton	Literary and Biblical Institution.	A. B. Meservey	Free Will Bapt.	6	
845	New London	Colby Academy	James P. Dixon	Bapt	4	
846	Northwood Center	Coe's Northwood Academy.	E. L. Blaine	Nonsect	1	
847	Northwood Ridge	Northwood Seminary	J. H. Hutchins	Free Bapt	2	
848	Pembroke	Pembroke Academy	Isaac Walker	Cong	2	
849	Portsmouth	Miss Morgan's School for Young Ladies.	Miss A. C. Morgan		0	
850	do	Smith Academy and Commercial College.	Lewis E. Smith		3	
851	Reed's Ferry	McGaw Institute	F. E. Burnette	Nonsect	1	
852	South Hampton	Barnard School	Miss Jane A. Darey	0	1	
853	Washington	Tubb's Union Academy.	Walter Gee	Nonsect	1	
854	Wolfborough	Brewster Free Academy	Edwin H. Lord, A. M	Nonsect	3	
	NEW JERSEY.					
855	Belvidere	Belvidere Academy	Geo. H. Hooper, M. A	Nonsect	1	
856	Beverly	Farnum Preparatory School.	James B. Dilks, A. M	0	1	
857	Blairstown	Blair Presbyterial Academy.	J. H. Shumaker	Presb	4	
858	Bloomfield	Academic Department of the German Theological School of Newark, N. J.	Rev. Chas. E. Knor, D. D., president.	Presb	4	
859	Bordentown	Adelphic Institute	Rev. Robert Julian, A. M.	Nonsect	1	
860	do	Military Institute	Rev. T. H. Landon, A. M	Nonsect	8	
861	Bridgetown	Ivy Hall	Rev. Henry Reeves, PH. D.	Nonsect	2	

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other private secondary schools for 1889-90—Continued.

ts nd- y de.	Female.	Number preparing for college classical course. Male.	Number preparing for college classical course. Female.	Number preparing for scientific course. Male.	Number preparing for scientific course. Female.	Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
)	30	----	----	----	----	6	No..	No..	-------	Yes.	$80,000	-------	-------	-------	-------	823
)	35	4	8	----	----	4	Yes.	No..	95	No..	3,500	-------	-------	$1,475	$200	824
5	30	0	0	0	0	0	No..	No..	200	Yes.	-------	-------	-------	-------	-------	825
9	28	20	0	29	28	6	------	No..	750	Yes.	18,000	-------	-------	-------	-------	826
9	50	15	10	10	15	7	No..	No..	500	No..	6,100	$4,000	-------	2,500	500	827
0	25	----	----	----	----	6	No..	Yes.	600	Yes.	60,100	-------	-------	-------	2,000	828
22	14	0	0	12	5	2	No..	No..	1,400	------	5,000	8,000	$300	150	320	829
20	15	----	----	7	6	0	No..	No..	-------	------	7,000	-------	-------	300	1,320	830
0	33	0	0	0	0	2	No..	Yes.	600	Yes.	17,500	-------	-------	-------	-------	831
527	0	200	0	27	0	52	Yes.	Yes.	6,000	Yes.	252,000	-------	-------	143,000	-------	832
58	58	16	15	16	15	12	Yes.	No..	1,075	No..	61,000	200,000	-------	1,200	14,000	833
7	6	1	0	----	----	0	No..	No..	-------	------	5,000	4,000	-------	-------	200	834
355	0	252	0	50	0	74	No..	Yes.	7,000	No..	131,500	440,000	-------	16,200	40,000	835
0	78	----	----	----	----	13	------	------	600	------	192,000	180,000	-------	-------	-------	836
26	16	0	0	5	3	3	No..	No..	340	No..	8,050	10,000	-------	-------	500	837
25	21	2	0	1	1	7	No..	No..	950	No..	15,050	-------	-------	525	75	838
15	15	4	1	3	0	5	No..	No..	100	------	75	-------	900	-------	550	839
32	33	4	2	----	----	5	No..	Yes.	525	No..	71,600	130,000	-------	-------	-------	840
10	20	5	0	----	----	4	No..	No..	-------	No..	5,500	2,000	-------	-------	165	841
62	59	----	----	----	----	7	No..	No..	1,500	------	25,500	30,000	-------	1,000	13,700	842
24	15	3	0	----	----	------	No..	No..	4,000	No..	10,500	20,000	-------	-------	1,000	843
125	81	----	----	----	----	58	No..	No..	4,000	No..	25,000	-------	-------	-------	-------	844
46	64	13	7	36	54	19	No..	Yes.	2,859	No..	50,500	86,000	-------	1,953	7,265	845
16	13	3	4	1	0	1	No..	Yes.	500	Yes.	10,350	300	-------	250	670	846
23	8	----	----	----	----	------	------	------	500	No..	5,000	2,500	-------	-------	2,500	847
23	37	6	3	0	0	6	No..	No..	900	No..	5,000	20,500	-------	852	1,106	848
0	30	----	----	----	----	------	------	------	345	------	25,000	-------	-------	-------	-------	849
46	15	7	0	----	----	39	No..	No..	-------	------	-------	-------	-------	-------	-------	850
23	23	4	3	----	----	2	No..	No..	500	No..	12,100	10,000	700	300	500	851
13	7	0	0	----	----	5	No..	No..	0	No..	1,000	4,400	-------	500	220	852
12	8	----	----	----	----	------	------	------	-------	------	-------	1,500	-------	-------	90	823
66	57	12	2	----	----	7	Yes.	No..	200	No..	52,800	-------	-------	-------	17,500	854
7	7	6	0	----	----	1	No..	No..	0	Yes.	5,000	-------	-------	1,700	-------	855
28	40	3	0	----	----	6	Yes.	No..	-------	Yes.	25,000	20,000	1,200	2,219	960	856
61	39	40	10	5	0	12	No..	Yes.	1,200	------	150,050	150,000	-------	4,000	109,000	857
24	0	24	0	----	----	6	No..	Yes.	4,000	No..	18,900	-------	-------	-------	5,000	858
13	1	0	0	----	----	0	No..	No..	0	No..	-------	-------	-------	-------	-------	859
60	0	11	0	18	0	20	No..	Yes.	500	No..	20,200	-------	-------	-------	-------	860
0	44	0	3	----	----	7	No..	Yes.	1,100	------	12,200	-------	-------	2,500	-------	861

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TABLE 9.—*Statistics of endowed academies, seminar*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of pupils	
					Male.	
	1	2	3	4	5	6
	NEW JERSEY—c't'd.					
862	Bridgeton	West Jersey Academy	Phoebus W. Lyon	Presb	2	1
863	Burlington	St. Mary's Hall	Miss J. G. McAllister	P. E	0	4
864	Cinnaminson	Westfield Friends' School.	Miss A. L. Croasdale	Friends	0	2
865	Elizabeth	English and French School for Young Ladies.	Misses L. A. Vail and F. E. Deane.		0	7
866	....do	The Pingry School	Pingry & Lyttle	Nonsect	5	
867	Englewood	English and Classical School.	W. W. Smith	Nonsect	3	2
868	Fort Lee	Institute of Holy Angels	Sister M. Nonna Dumphy.	R. C	0	8
869	Freehold	Freehold Institute	A. A. Chambers	Presb	3	2
870	....do	Young Ladies' Seminary	Miss Eunice D. Sewall	Nonsect	0	5
871	Hightstown	Hightstown Seminary	F. D. Budlong	Nonsect	1	2
872	....do	Peddie Institute	H. E. Slaught, A. M	Bapt	5	
873	Hoboken	Academy of the Sacred Heart.	Sister Clara Agnes	R. C	0	3
874	....do	Hoboken Academy	Arnold Züllig	Nonsect	2	1
875	....do	Stevens School	Rev. Edward Wall, A. M		12	6
876	Jersey City	Hasbrouch Institute, 109 Grand st.	Chas. C. Stimets, A. M.	Nonsect	4	4
877	Lakewood	Courtland School	Thos. D. Supplee, PH. D.	Epis	6	3
878	....do	The Oaks	Miss E. F. Farrington		0	7
879	Lawrenceville	Lawrenceville School	James C. Mackenzie, head master.	Presb	12	0
880	Matawan	Glenwood Collegiate Institute.	Chas. A. Jaggar, A. M., PH. D.	Nonsect	2	5
881	Montclair	Bissell-Bradford School	Mrs. F. F. Bissell, Miss. C. F. Bradford.		0	5
882	....do	Boys' School	J. G. MacVicar	0	3	0
883	Moorestown	Friends' High School	Geo. E. Megarge	Friends	1	5
884	....do	Moorestown Academy	Walter L. Mo	Friends	1	3
885	Morristown	Morris Academy	Chas. D. Platt, A. M	Nonsect	6	1
886	....do	Morristown Seminary	Miss E. E. Dana	Nonsect	2	12
887	Mount Holly	Mount Holly Academy	Henry M. Walradt	Nonsect	3	1
888	Newark	Newark Academy	S. A. Farrand	Nonsect	11	1
889	....do	Newark Seminary for Young Ladies.	Miss A. F. Whitmore	Presb	0	5
890	New Brunswick	The Misses Anabel's School.	Misses Anable		0	4
891	....do	Rutgers College Seminary.	C. H. Cook, secretary to head master.	0	5	3
892	New Egypt	New Egypt Classical Seminary.	Geo. D. Horner, A. M	Meth	1	2
893	Newton	Collegiate Institute	Joel Wilson	Nonsect	4	2
894	Orange	Dearborn Morgan School.	D. A. Kennedy, PH. D., Dearborn, Morgan & Co.		3	16
895	Pennington	Pennington Seminary	Thomas Hanlon, D. D	Meth	8	7
896	Plainfield	Mr. Leal's School for Boys.	John Leal		4	0
897	....do	Seminary for Young Ladies.	Miss E. E. Kenyon	Nonsect	1	5
898	Princeton	Preparatory School	J. B. Fine		5	0
899	Salem	Friends' School	Mrs. R. H. Reinhardt	Friends	0	4
900	Short Hills	Baquit Institute	Harriet S. Baquit	Epis	0	1
901	Somerville	Classical School	Rev. James E. Mets		2	2
902	Summit	Collegiate Institute	Martin Bäbler	0	1	5
903	....do	Summit Academy	James Heard	Nonsect	3	0
904	Westfield	Westfield Institute	Miss A. J. Moore	Nonsect	0	2
905	Woodstown	Woodstown Academy	A. C. Harris	Friends	1	3

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nd other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
28	0	4	0	2	0	6	No..	No..	500	Yes.	$30,150	.....	.....	$1,500	$1,000	862
0	60	.....	.....	.....	.....	5	No..	Yes.	2,000	Yes.	101,950	.....	.....	16,387	.....	863
6	3	0	1	1	0	3	Yes.	No..	28	.....	.....	.....	.....	900	.....	864
0	44	0	5	.....	.....	15	No..	No..	.....	Yes.	.....	.....	.....	.....	.....	865
65	0	10	0	8	0	13	No..	No..	0	No..	10,500	.....	.....	8,250	.....	866
38	0	20	0	12	0	.....	Yes.	No..	.....	No..	.....	.....	.....	.....	.....	867
0	48	.....	.....	.....	.....	2	Yes.	No..	600	Yes.	.....	.....	.....	.....	.....	868
38	0	19	0	8	0	5	No..	Yes.	1,000	Yes.	36,000	.....	.....	.....	.....	869
0	40	0	1	6	1	8	No..	Yes.	200	Yes.	23,050	.....	.....	.....	.....	870
0	20	0	2	.....	.....	.....	No..	No..	200	Yes.	8,025	.....	.....	2,000	.....	871
116	76	45	10	.....	.....	21	.....	Yes.	400	No..	200,000	$70,000	.....	.....	48,500	872
0	30	.....	.....	.....	.....	7	Yes.	No..	600	Yes.	56,000	.....	.....	2,000	.....	873
53	27	.....	.....	48	21	20	Yes.	Yes.	200	Yes.	15,000	.....	.....	16,000	.....	874
174	0	16	0	118	.....	41	Yes.	Yes.	.....	.....	50,012	.....	.....	27,372	.....	875
52	40	30	5	20	2	19	Yes.	Yes.	500	Yes.	30,600	.....	.....	30,000	.....	876
30	0	12	0	18	0	5	No..	No..	3,000	Yes.	15,000	.....	.....	.....	.....	877
0	20	.....	.....	.....	.....	.....	No..	Yes.	15,000	Yes.	.....	.....	.....	.....	.....	878
226	0	.....	.....	.....	.....	29	Yes.	Yes.	2,500	No..	503,000	400,000	.....	100,000	.....	879
36	29	2	0	1	0	2	Yes.	Yes.	300	Yes.	200	.....	.....	4,500	.....	880
14	31	.....	.....	.....	.....	.....	Yes.	Yes.	.....	.....	.....	.....	.....	.....	.....	881
30	0	20	0	10	0	3	Yes.	No..	500	Yes.	16,300	.....	.....	8,000	.....	882
30	26	.....	.....	.....	.....	12	Yes.	No..	0	Yes.	7,200	1,000	.....	3,500	60	883
15	10	0	0	.....	.....	0	Yes.	No..	.....	Yes.	4,200	.....	.....	1,750	.....	884
43	0	1	0	2	0	0	No..	No..	.....	Yes.	400	.....	.....	6,000	.....	885
0	125	0	4	.....	.....	8	No..	Yes.	.....	Yes.	50,200	.....	.....	.....	.....	886
25	0	7	0	10	0	3	No..	Yes.	500	Yes.	10,100	.....	.....	7,150	10	887
147	0	35	0	50	0	23	No..	Yes.	200	Yes.	77,000	18,000	$33,357	24,357	900	888
0	30	0	6	.....	.....	0	No..	No..	575	Yes.	25	.....	6,500	.....	.....	889
0	60	0	2	6	0	6	No..	No..	1,000	Yes.	17,000	.....	.....	8,000	.....	890
80	0	40	0	40	0	17	Yes.	No..	.....	Yes.	36,500	.....	.....	5,430	500	891
5	10	2	3	0	0	2	No..	No..	0	Yes.	6,020	.....	.....	800	.....	892
50	23	6	0	22	11	20	No..	Yes.	750	Yes.	12,800	.....	.....	1,932	.....	893
92	54	30	12	10	5	9	No..	No..	205	Yes.	32,300	.....	.....	.....	.....	894
100	50	15	0	10	0	33	No..	Yes.	2,500	Yes.	150,500	8,000	.....	7,500	8,400	895
39	0	34	0	2	0	15	No..	No..	0	No..	5,800	.....	.....	7,200	.....	896
0	50	.....	.....	.....	.....	1	No..	No..	1,000	Yes.	50,200	.....	.....	.....	.....	897
0	50	30	0	20	0	15	No..	Yes.	200	No..	18,000	.....	.....	.....	.....	898
30	11	3	1	3	0	4	Yes.	No..	.....	Yes.	.....	.....	.....	1,500	.....	899
0	35	.....	.....	0	10	0	No..	No..	2,000	Yes.	.....	.....	.....	2,940	.....	900
16	12	6	1	3	7	11	No..	No..	500	Yes.	6,100	.....	.....	2,000	.....	901
4	30	.....	.....	.....	.....	.....	No..	No..	0	.....	.....	.....	.....	.....	.....	902
18	0	10	0	8	0	0	No..	No..	0	Yes.	15,100	.....	.....	3,600	.....	903
4	4	0	0	2	0	0	Yes.	No..	0	.....	.....	.....	.....	1,000	.....	904
15	16	1	1	1	1	0	No..	No..	500	Yes.	11,300	3,500	.....	1,400	200	905

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TABLE 9.—*Statistics of endowed academies, seminar*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of pupils in instructors.	
					Male.	Female.
	1	2	3	4	5	6
	NEW MEXICO.					
906	Albuquerque	Albuquerque Academy	Charles E. Hodgin	Cong	1	5
907	Las Cruces	Visitation Academy	Sister M. Praxedes	R. C	0	2
908	Las Vegas	Las Vegas Academy	G. S. Ramsay	Cong	4	3
909	Santa Fe	Lovetto Academy	Mother F. Lamy	R. C	0	1
910	do	St. Michael's College	Brother Botulph	R. C	4	0
	NEW YORK.					
911	Adams	Adams Collegiate Institute.	Orlo B. Rhodes, A. M	0	3	4
912	Albany	Academy of the Sacred Heart.	Madame E. L. Hogan	R. C	0	12
913	do	Albany Academy	Henry P. Warren	Nonsect	7	5
914	do	Albany Female Academy.	Miss L. A. Plympton	Nonsect	1	5
915	do	Christian Brothers' Academy.	Brother Constantius	R. C	3	0
916	do	St. Agnes School	Miss E. W. Boyd	Epis	4	27
917	Amsterdam	Amsterdam Academy	Charles C. Wetsell	Nonsect	2	3
918	do	St. Mary's Catholic Institute.	Rev. J. P. McIncrow	R. C	2	1
919	Antwerp	Ives Seminary	E. M. Wheeler		1	1
920	Argyle	Argyle Academy	J. D. Barr, ex-principal.	Nonsect	1	1
921	Astoria	Astoria Latin School	Chas. Lyman Shaw		1	0
922	Aurora	Cayuga Lake Military Academy.	A. K. McAlpine and C. J. Wright.	Nonsect	6	0
923	Batavia	Park Place School	Miss Gertrude Wilson	Nonsect	0	1
924	Binghamton	Lady Jane Grey School.	Mrs. J. G. Hyde	Nonsect	1	4
925	Bridge Hampton	Bridge Hampton Literary and Commercial stitute.	Lewis W. Hallock		2	1
926	Brooklyn	Adelphi Academy	Albert C. Perkins	Nonsect	8	10
927	do	Berkeley Institute (No. 183-185 Lincoln Place).	Miss C. E. Hayner	Nonsect	1	3
928	do	Brooklyn Heights Seminary (No. 138 Montague st).	Miss M. O. Steele	Nonsect	3	14
929	do	Brooklyn Latin School (No. 145 Montague st).	Caskie Harrison		6	0
930	do	Cheneviere Institute for Girls (No. 102 Berkeley Place).	Madame J. M. Stamm	Nonsect	0	2
931	do	Christiansen Institute (No. 119 Sixth ave.).	Mrs. E. C. Stacker	Nonsect	0	1
932	do	Female Institute of the Visitation (No. 209 Clinton ave.).	Sisters of the Visitation.	R. C	0	9
933	do	German American Academy for Boys.	Wm. A. Stamm and Madame J. M. Stamm.	Nonsect	2	0
934	do	Mrs. Goodwin's School for Boys.	Mrs. R. Goodwin	Nonsect	0	10
935	Buffalo	Buffalo Seminary	Mrs. C. F. Hartt	Nonsect	0	7
936	do	English, Classical, and Mathematical School for Boys (129 College st.).	Lucius E. Hawley, A.M.	Nonsect	3	0
937	do	Heathcote School	Lester Wheeler	0	1	1
938	do	Holy Angels' Academy	Sister U. M. Kirby	R. C	0	4
939	do	Sacred Heart High School.	Sister M. Ceonarda	R. C	0	3
940	do	St. Joseph's College	Rev. Brother Adleer	R. C	7	0
941	Canandaigua	Canandaigua Academy	J. Carlton Norris		3	2

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d other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
13	20	0	0	....	....	3	Yes.	No..	150	Yes.	$5,000	.....	$400	$1,800	$2,100	906
0	15	0	0	0	5	2	No..	.....	250	Yes.	20,200	.....	.....	6,500	.....	907
31	21	6	4	6	5	2	No..	No..	250	Yes.	9,100	.....	.....	2,300	2,525	908
0	3	0	0	0	3	1	No..	No..	500	Yes.	25,000	.....	.....	1,500	.....	909
30	0	....	....	0	0	7	No..	Yes.	.....	Yes.	40,000	.....	.....	.....	.....	910
57	74	9	0	0	0	17	No..	No..	701	No..	49,703	$2,000	1,254	3,000	60	911
0	100	0	0	0	0	10	No..	No..	3,020	Yes.	2,000	0	0	29,400	0	912
169	0	50	0	50	0	13	No..	No..	1,000	Yes.	122,000	20,000	375	16,280	1,209	913
0	60	0	0	0	1	9	Yes.	No..	4,000	Yes.	75,300	0	0	0	0	914
60	0	....	....	....	....	0	Yes.	No..	2,000	Yes.	25,000	.....	.....	.....	.....	915
0	225	....	....	....	....	.....	No..	Yes.	3,300	Yes.	150,700	0	0	18,000	0	916
45	35	7	3	2	0	2	No..	No..	487	Yes.	400	0	26	3,500	0	917
20	30	10	0	5	0	12	No..	No..	1,200	Yes.	31,000	0	0	50	0	918
13	8	5	2	8	6	16	No..	Yes.	631	Yes.	31,453	5,000	316	1,849	600	919
37	47	1	2	0	0	0	No..	No..	967	Yes.	3,895	0	17	850	0	920
8	0	7	0	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	921
74	0	8	0	7	0	7	No..	Yes.	2,562	No..	21,400	1,000	0	14,700	40	922
0	12	0	0	....	....	2	No..	No..	0	Yes.	15,000	0	0	0	0	923
0	40	0	5	0	20	3	No..	Yes.	3,000	Yes.	20,000	0	.....	2,500	0	924
24	17	9	0	0	0	5	No..	No..	86	.....	3,650	0	0	726	.....	925
127	146	21	6	10	0	29	Yes.	Yes.	1,837	Yes.	96,364	0	422	82,629	0	926
0	20	....	....	....	....	.....	No..	Yes.	150	Yes.	35,000	.....	.....	4,678	1,200	927
0	132	....	....	....	....	2	.....	.....	300	.....	.....	.....	.....	23,705	.....	928
70	0	25	0	15	0	15	No..	Yes.	.....	Yes.	300	.....	.....	.....	.....	929
0	20	....	....	....	....	.....	No..	.....	.....	Yes.	75,000	.....	.....	.....	.....	930
0	6	....	....	....	....	5	Yes.	No..	0	Yes.	.....	.....	.....	.....	.....	931
0	100	....	....	....	....	3	No..	No..	2,000	Yes.	500	.....	.....	.....	.....	932
20	0	2	0	2	0	0	No..	Yes.	.....	Yes.	7,500	.....	.....	.....	.....	933
0	40	0	1	0	1	2	Yes.	Yes.	.....	Yes.	30,500	.....	.....	6,000	.....	934
0	78	0	0	....	....	13	No..	Yes.	1,588	Yes.	42,819	400	.....	14,313	28	935
20	0	12	0	....	....	1	No..	No..	.....	No..	9,000	.....	.....	3,000	.....	936
20	0	7	0	13	0	3	No..	No..	0	Yes.	35,000	0	0	0	0	937
0	34	....	....	0	6	11	.....	.....	1,300	Yes.	60,200	.....	.....	10,000	.....	938
0	30	0	24	0	3	5	Yes.	.....	150	Yes.	40,000	0	.....	1,600	.....	939
85	0	40	0	35	0	16	Yes.	Yes.	4,000	Yes.	145,000	0	0	1,200	0	940
90	0	30	0	20	0	14	No..	Yes.	1,200	No..	26,500	12,000	250	3,400	700	941

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TABLE 9.—*Statistics of endowed academies, seminaries*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Male.	Female.
	1	2	3	4	5	6
	NEW YORK—cont'd.					
942	Canandaigua	Granger Place School	Miss C. A. Comstock, president.	Nonsect	2	
943	do	Upham School	Mrs. S. D. Backus	Nonsect	1	
944	Canisteo	Canisteo Academy	D. M. Estee, M. A		1	
945	Carmel	Drew Seminary and Female College.	Geo. Crosby Smith	M. E	1	
946	Cazenovia	Cazenovia Seminary	Isaac N. Clements, A.M.	M. E	6	
947	Chappaqua	Chappaqua Mountain Institute.	S. C. Collins	Friends	4	
948	Cherry Valley	Cherry Valley Academy	Arial McMaster	Presb	2	
949	Cincinnatus	Cincinnatus Academy	Elmore G. Page	Nonsect	1	
950	Claverack	Claverick College and Hudson River Institute.	Rev. Arthur H. Flack, A. M.	M. E	4	
951	Clifton Springs	Clifton Springs Female Academy.	Wm. A. Deering, A. B., A. M.	Nonsect	1	4
952	Clinton	Clinton Grammar School.	Isaac O. Best	Presb	3	
953	do	Cottage Seminary	Rev. C. W. Hawley, A.M.	Nonsect	1	
954	do	Houghton Seminary	A. Gardiner Benedict	Nonsect	2	4
955	Cornwall-on-Hudson.	Cornwall Heights School.	Carlos H. Stone	Nonsect	4	1
956	do	New York Military Academy.	Chas. J. Wright, B. S., A. M., president.	Nonsect	7	0
957	Delhi	Delaware Academy	W. D. Graves	0	3	4
958	Dobbs Ferry	Westminster School	W. L. Cushing		6	0
959	Dundee	Dundee Preparatory School.	John Kline	0	1	3
960	Easton	Marshall Seminary	Mrs. A. D. Cloud	Friends	0	
961	East Springfield	East Springfield Academy.	Mark Hollister, A. B.	Nonsect	1	1
962	Eddytown	Starkey Seminary	G. R. Hammond	Christian	2	
963	Elba	Elba Private School	Miss Mary Hollister	0	0	1
964	Elbridge	Monroe Collegiate Institute.	T. K. Wright	Nonsect	2	1
965	Fairfield	Fairfield Seminary	D. D. and F. L. Warne	Nonsect	2	4
966	Fishkill-on-Hudson.	De Garmo Institute	James M. De Garmo, A. M., PH. D.	Nonsect	2	2
967	Flatbush	Erasmus Hall Academy	Rev. R. G. Strong	Nonsect	2	1
968	Flushing	Flushing Institute	E. A. Fairchild	Nonsect	5	0
969	do	St. Joseph's Academy	Mother M. Teresa	R. C	0	12
970	Franklin	Delaware Literary Institute.	Chas. H. Verrill, A. M., PH. D.	Nonsect	4	3
971	Franklinville	Ten Broeck Free Academy.	Hamilton Terry	0	2	2
972	Garden City, L. I.	Cathedral School of St. Mary.	Miss J. H. Farwell	P. E	1	2
973	do	Cathedral School of St. Paul.	Chas. S. Moore	Epis	10	0
974	Geneva	De Lancey School for Girls.	Miss H. N. Bridge	Epis	1	2
975	Gilbertsville	Gilbertsville Academy and Collegiate Institute.	S. Dwight Arms, A. M.		1	1
976	Goshen	Miss Hogarth's School for Girls.	Miss M. O. Hogarth	Epis	1	2
977	Greenville	Greenville Academy	T. W. Stewart	Presb	1	1
978	Hamilton	Colgate Academy	Rev. John Greene, PH. D.	Baptist	6	0
979	Hartwick Seminary.	Hartwick Seminary	Rev. James Pitcher, A. M.	Luth	5	1
980	Havana	Cook Academy	A. C. Hill	Baptist	5	4
981	Hempstead	Hempstead Institute	Prof. Ephraim Hinds	Nonsect	1	2
982	Hudson	School for Young Ladies	Miss S. R. Skinner		0	2

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ıd other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Num. ber preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department.	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	70	0	5	0	....	3	Yes.	Yes.	1,000	Yes.	$24,276	.....	.....	.....	.....	942
0	15	0	0	0	0	2	No..	Yes.	1,000	Yes.	10,150	0	0	$1,250	0	943
35	46	2	0	24	0	12	No..	No..	600	Yes.	16,250	$2,000	$1,000	2,500	$131	944
0	29	0	12	0	8	6	No..	No..	3,000	Yes.	50,200	0	0	0	0	945
139	125	35	5	25	5	28	Yes.	No..	2,500	No..	75,000	30,000	1,902	6,104	1,850	946
48	39	....	....	....	....	7	Yes.	Yes.	.....	No..	91,500	.....	.....	.....	10,500	947
11	11	4	0	2	6	2	No..	No..	.....	Yes.	3,600	0	0	325	0	948
32	41	2	0	0	0	3	No..	No..	419	No..	4,483	9	452	600	0	949
70	40	17	1	5	0	10	No..	Yes.	1,386	Yes.	44,709	0	353	7,050	0	950
25	50	12	15	0	0	0	No..	No..	1,700	Yes.	15,050	.....	.....	.....	.....	951
110	0	38	0	12	0	15	No..	Yes.	328	Yes.	8,235	.....	49	1,560	.....	952
0	39	0	4	0	0	6	Yes.	No..	540	Yes.	17,090	0	.....	1,014	0	953
0	90	0	0	0	0	9	No..	No..	1,260	Yes.	50,425	0	228	3,973	150	954
14	0	6	0	2	0	4	No..	Yes.	150	No..	1,575	.....	.....	.....	.....	955
9	0	10	0	50	0	48	No..	Yes.	2,000	Yes.	40,700	0	0	.....	50	956
72	80	10	8	4	0	22	No..	Yes.	2,056	Yes.	35,000	0	560	3,000	250	957
70	0	50	0	20	0	4	No..	Yes.	300	No..	100,000	.....	.....	.....	.....	958
85	81	4	0	....	....	14	No..	No..	250	Yes.	7,800	0	500	2,500	0	959
12	12	0	0	8	12	3	Yes.	Yes.	1,000	Yes.	14,250	0	0	400	100	960
32	37	3	0	2	0	4	No..	No..	350	No..	2,780	0	166	804	39	961
42	28	10	2	21	12	12	No..	No..	1,678	No..	24,788	2,000	432	2,037	2,537	962
2	4	....	....	....	....	0	No..	No..	0	.....	1,000	.....	.....	300	.....	963
25	25	7	0	3	2	5	No..	No..	950	No..	22,700	12,000	277	850	950	964
135	93	45	40	30	13	28	Yes.	Yes.	8,560	No..	40,500	0	1,125	7,825	0	965
20	20	8	2	4	2	0	No..	No..	9	Yes.	17,000	0	.....	1,106	0	966
22	9	8	0	1	0	3	Yes.	Yes.	2,755	Yes.	6,400	3,000	0	2,944	400	967
38	0	3	0	0	0	0	No..	Yes.	1,300	Yes.	70,250	0	.....	2,185	0	968
0	100	....	....	0	0	10	Yes.	....	200	Yes.	200,100	.....	.....	.....	.....	969
93	96	17	8	8	3	13	Yes.	No..	1,500	Yes.	30,200	.....	889	2,829	2,836	970
69	72	9	1	0	0	7	No..	No..	1,083	No..	24,200	47,964	386	1,012	2,978	971
0	18	0	0	0	6	0	Yes.	Yes.	620	Yes.	.....	.....	.....	5,100	125	972
100	0	50	0	40	0	16	No..	Yes.	1,025	Yes.	801,000	.....	.....	40,000	.....	973
0	18	0	0	0	0	0	Yes.	No..	700	Yes.	13,625	0	34	2,514	0	974
30	30	4	2	2	2	1	No..	No..	705	Yes.	6,263	2,875	143	1,066	209	975
0	35	0	0	0	0	2	No..	No..	350	Yes.	6,000	0	0	2,000	0	976
15	30	0	0	0	0	0	No..	No..	.....	No..	3,800	.....	175	735	.....	977
151	8	100	1	15	0	25	No..	No..	1,700	No..	95,000	55,000	30	4,626	6,225	978
55	21	....	....	....	....	7	.....	.....	4,000	Yes.	38,232	40,000	207	311	2,858	979
72	70	....	....	....	....	.....	.....	Yes.	1,800	No..	.....	54,000	.....	.....	.....	980
10	18	0	0	0	0	2	No..	No..	0	Yes.	12,200	0	0	0	0	981
0	9	0	1	0	0	4	No..	No..	100	Yes.	.....	0	0	723	0	982

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TABLE 9.—*Statistics of endowed academies, seminar*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Male.	
	1	2	3	4	5	6
	NEW YORK—cont'd.					
983	Ithaca	Cascadilla School	James E. Russell	Nonsect	5	
984	Jamaica	Union Hall Seminary	Miss A. P. Townsend		0	
985	Le Roy	Le Roy Academic Institute.	F. M. Comstock, A. M., C. E.	0	1	
986	Lima	Genesee Wesleyan Seminary.	Rev. W. R. Benham, A. M., D. D.	M. E	4	
987	Macedon Center	Macedon Academy	Lewis H. Clark	Nonsect	2	
988	Marion	Marion Collegiate Institute.	H. M. Richmond	Baptist	1	
989	Moriah	Sherman Academy	B. L. Brown, A. B.	Nonsect	1	
990	Mt. Vernon	School for Young Ladies	Misses Lockwood	Nonsect	0	
991	New Brighton, L. I.	Brighton Heights Seminary.	Geo. W. Cook, PH. D	Nonsect	1	
992	New Brighton	Prospect Hill School	Miss L. H. Botsford	Nonsect	0	
993	....do	St. Austin's School	Alfred G. Mortimer, D. D.	P. E	6	
994	....do	Trinity Classical and English School for Boys (52 Lafayette ave.).	John M. Hawkins, PH. D.	P. E	1	
995	New York	Academy Mount St. Vincent-on-the-Hudson.	Sister Maria, directress.	R. C	0	
996	....do	Barnard School (117 and 119 W. 125th st.).	Wm. L. Hazen, B. A., LL. B.	Nonsect	4	
997	....do	Berkeley School (6 E. 44th st.).	John S. White, LL. D		9	
998	....do	Brearley School (6 E. 45th st.).	J. G. Crosswell, A. B	Nonsect	1	
999	....do	Callisen's Day School for Boys (131 W. 43d st.).	A. Callisen, jr	Nonsect	5	
1000	....do	Classical and English School (423 Madison ave.).	I. H. Morse	0	4	
1001	....do	Collegiate School (721 Madison ave.).	Rev. Henry B. Chapin, D. D., PH. D.	Nonsect	5	
1002	....do	Collegiate School for Boys (34 W. 40th st.).	Wm. D. Halsey, PH. D.		9	
1003	....do	Columbia Grammar School (51st st.).	R. S. Bacon, A. M., M. D., and B. H. Campbell, A. M.	0	12	
1004	....do	Comstock School (32 W. 40th st.).	Miss Lydia Day		3	
1005	....do	Cutler School (20 W. 43d st.).	Arthur H. Cutler, A. B., PH. D.		4	
1006	....do	De La Salle Institute (108 W. 59th st.).	Rev. Brother James	R. C	11	
1007	....do	Dwight School (1481 Broadway).	Henry C. Miller	0	7	
1008	New York (Manhattanville).	Female Academy of the Sacred Heart.	Madame S. Jones	R. C	0	
1009	New York	Friends Seminary (E. 16th st.).	Ed. A. H. Allen, C. E.	Friends	3	
1010	....do	Mrs. Froehlick's School (20 E. 50th st.).	Mrs. B. Froehlick	Nonsect	10	
1011	....do	Miss Gibbon's School	Mrs. S. H. Emerson	Nonsect	1	
1012	....do	Heidenfeld Institute (824 Lexington ave.).	Dr. Theo. E. Heidenfeld.	0	1	
1013	....do	Holy Cross Academy	Sister M. Helena	R. C	0	
1014	....do	La Salle Academy	Brother Alfred	R. C	3	
1015	....do	Lenox Institute (334-336 Lenox ave.).	Andrew Zerban	Nonsect	7	
1016	....do	MacMullin's School (521 W. 161st st.).	John MacMullen	Nonsect	1	

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nd other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
40	0	0	0	....	....	30	Yes.	Yes.	0	Yes.	$30,000	0	0	$8,000	0	983
0	40	....	....	....	....	....	No..	No..	500	Yes.	35	.....	.....	.....	.....	984
65	35	1	1	10	2	0	No..	No..	1,073	Yes.	13,941	$10,700	$312	2,851	$741	985
80	88	....	....	0	0	9	Yes.	Yes.	5,000	No..	77,000	80,000	833	.....	4,679	986
40	45	0	0	2	3	9	No..	No..	450	Yes.	4,250	0	658	700	0	987
59	63	16	4	0	0	8	No..	No..	567	No..	15,864	0	458	1,286	25	988
40	50	1	0	8	6	6	Yes.	No..	300	Yes.	8,565	25,000	400	350	1,500	989
0	35	0	11	....	....	0	No..	No..	.....	Yes.	18,000	0	0	8,000	0	990
0	35	0	6	0	0	1	Yes.	Yes.	2,000	Yes.	40,000	0	0	4,000	0	991
0	10	0	0	0	0	0	Yes.	No..	0	Yes.	.....	.....	.....	.....	.....	992
43	0	30	0	13	0	6	No..	Yes.	.....	Yes.	150,000	.....	.....	.....	.....	993
26	1	18	1	0	0	6	No..	No..	2,500	No..	23,000	0	0	.....	0	994
0	42	0	0	0	0	6	No..	Yes.	4,800	Yes.	263,900	0	.....	25,258	0	995
27	0	8	0	7	0	8	Yes.	Yes.	250	Yes.	50,150	.....	.....	25,000	.....	996
200	0	100	0	50	0	22	Yes.	Yes.	1,000	Yes.	351,500	.....	.....	90,000	.....	997
0	152	0	0	0	0	0	Yes.	Yes.	.....	No..	0	0	0	0	0	998
60	0	5	0	0	0	0	No..	Yes.	200	Yes.	.....	.....	.....	10,000	.....	999
42	0	....	....	0	0	0	No..	No..	.....	Yes.	.....	.....	.....	.....	.....	1000
48	0	20	0	5	0	6	No..	Yes.	.....	Yes.	.....	.....	.....	.....	.....	1001
110	0	50	0	25	0	18	No..	Yes.	.....	No..	.....	.....	.....	.....	.....	1002
270	0	60	0	65	0	42	No..	Yes.	.....	Yes.	100,000	0	.....	.....	0	1003
....	87	0	0	0	0	6	Yes.	.....	700	Yes.	.....	.....	.....	.....	.....	1004
65	0	60	0	5	0	9	No..	Yes.	500	Yes.	.....	0	0	40,000	0	1005
153	0	103	0	50	0	0	Yes.	Yes.	3,470	Yes.	300,900	0	.....	23,000	0	1006
68	0	43	0	20	0	15	No..	No..	.....	No..	.....	0	0	11,600	0	1007
0	166	0	0	0	0	5	No..	No..	100	Yes.	300	0	0	32,500	0	1008
17	39	....	....	0	0	8	Yes.	Yes.	.....	.....	.....	.....	.....	6,538	.....	1009
3	140	0	0	....	....	9	Yes.	.....	1,200	Yes.	0	0	0	0	0	1010
0	47	0	0	....	....	1	No..	No..	.....	Yes.	.....	.....	.....	.....	.....	1011
12	13	4	3	2	0	8	Yes.	Yes.	....	Yes.	500	.....	.....	12,000	.....	1012
0	75	0	40	....	....	8	Yes.	No..	1,000	Yes.	500	.....	.....	.....	.....	1013
50	0	15	0	12	0	0	No..	Yes.	2,000	Yes.	60,300	0	0	1,500	0	1014
22	18	8	6	4	2	0	Yes.	Yes.	500	Yes.	50,500	0	0	6,000	0	1015
9	0	1	0	0	0	0	Yes.	Yes.	500	Yes.	.....	.....	.....	1,130	.....	1016

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TABLE 9.—*Statistics of endowed academies, seminar-*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of pupils in attendance.	
					Male.	Female.
	1	2	3	4	5	6
	NEW YORK—cont'd.					
1017	New York	Miss E. M. Mewell's French, German, and Classical School for Girls (57 W. 30th st.).	Miss Ellen Newell	Nonsect.	0	4
1018	....do	Misses A. M. Falconer Perrin's School for Girls (224 Lenox ave.).	Misses Falconer Perrin.	Nonsect.	2	4
1019	....do	The Reed School (6 and 8 E. 53d st.).	Miss J. G. McAllister	P. E.	2	5
1020	....do	Dr. J. Sachs' Collegiate Institute (37 W. 59th st.).	Dr. Julius Sachs	0	13	4
1021	....do	St. John Baptist School (233 E. 17th st.).	Mother Superior	P. E.	2	4
1022	....do	St. Louis College (224 W. 58th st.).	John P. Brophy, president.	R. C.	11	0
1023	....do	St. Matthews Academy (148 Elizabeth st.).	Rev. E. Bohm, director.	Ev. Luth.	1	1
1024	....do	Ursuline Convent of St. Teresas.	Mother Seraphine, O. St. U.	R. C.	0	1
1025	....do	Van Norman Institute (280-282 W. 71st st.).	Madam Van Norman	Nonsect.	0	4
1026	....do	Woodbridge School (32 E. 45th st.).	J. Woodbridge Davis		4	0
1027	....do	Woolsey Academy (20 W. 59th st.).	Dennis Beach	Nonsect.	4	0
1028	North Chili	The A. M. Chesbrough Seminary.	B. H. Roberts, A.M.	Nonsect.	1	2
1029	Oakfield	Cary Collegiate Seminary.	Rev. Curtis Gove, A.M.		1	3
1030	Onondaga Valley	Onondaga Academy	Edgar D. Niles	Nonsect.	1	5
1031	Oxford	Oxford Academy	Fred L. Gamage	0	1	4
1032	Peekskill	Mohegan Lake School	Henry Waters		3	0
1033	....do	Peekskill Military Academy.	John N. Tilden	Nonsect.	9	0
1034	....do	St. Gabriel's School	Sister Esther	Epis.	0	3
1035	....do	Vieuland Preparatory School.	Carl A. Harstrom, M.A.	Epis.	3	0
1036	....do	Westchester County Institute.	Charles Unterreiner	0	2	1
1037	....do	Worrall Hall	Charles J. Wright, B. S., A.M.	Nonsect.	3	2
1038	Peterboro	Evans Academy	Robt. C. Avery		1	2
1039	Pike	Pike Seminary	E. J. Quigley	Free Bapt.	2	2
1040	Pine Plains	Seymour Smith Academy.	Rev. A. Mattice, A.M.	Nonsect.	2	3
1041	Plattsburg	D'Youville Academy	Sister McMillan	R.C.	0	4
1042	Pompey	Pompey Academy	Willis A. Ingalls, B.S.	Nonsect.	1	1
1043	Poughkeepsie	Classical and Home Institute.	Miss S. V. H. Butler	Nonsect.	0	2
1044	....do	Lyndon Hall School for Young Ladies	Sam'l W. Buck		2	6
1045	....do	Riverview Academy	Bisbee & Amen	Nonsect.	7	0
1046	....do	Quincy School	Miss C. E. Silloway	Nonsect.	0	2
1047	Pulaski	Pulaski Academy	Wm. C. Gorman	0	1	3
1048	Randolph	Chamberlain Institute	Rev. James T. Edwards, D. D.	Meth.	5	4
1049	Reed Creek	Union Seminary	Rev. Wm. H. Rogers, A. M.	Nonsect.	2	4
1050	Rochester	Academy of the Sacred Heart.	Miss A. M. Carrigan	R. C.	0	4
1051	....do	Fort Hill School (10 Grove Place).	James H. Lee	Nonsect.	2	1
1052	....do	Hale's Classical and Scientific School.	Geo. D. Hale	Nonsect.	1	0

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nd other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	10	0	4	0	0	0	Yes.	Yes.	200	Yes.	.....	.....	.....	$2,300	.....	1017
0	39	0	4	0	0	5	.....	.....	963	Yes.	$35,250	.....	.....	5,775	$11,000	1018
0	50	0	1	0	0	25	Yes.	No..	1,500	Yes.	150,000	0	0	30,000	0	1019
200	1	45	1	8	0	30	Yes.	Yes.	500	Yes.	51,500	.....	.....	.....	.....	1020
0	30	0	3	0	0	4	No..	Yes.	500	Yes.	.....	.....	.....	.....	.....	1021
24	36	30	0	5	0	5	No..	No..	4,000	Yes.	.....	.....	.....	.....	.....	1022
31	0	31	0	0	0	8	Yes.	No..	.....	Yes.	30,000	.....	.....	4,500	.....	1023
0	9	0	0	0	0	4	Yes.	No..	500	Yes.	30,000	.....	.....	2,000	.....	1024
0	31	0	30	0	0	6	No..	No..	1,200	Yes.	75,000	.....	.....	.....	.....	1025
20	0	1	0	17	0	12	Yes.	No..	350	Yes.	150	.....	.....	7,500	.....	1026
40	0	14	0	6	0	5	No..	Yes.	400	Yes.	65,000	0	.....	12,000	0	1027
43	42	2	1	0	1	7	No..	No..	947	Yes.	40,657	$7,500	$39	2,030	678	1028
35	44	4	2	1	0	2	No..	No..	1,345	.....	23,800	.....	110	1,250	0	1029
61	37	2	1	10	0	6	Yes.	No..	900	Yes.	12,200	2,000	900	1,000	0	1030
45	52	4	0	10	14	9	No..	No..	1,498	Yes.	12,700	10	604	2,900	500	1031
28	0	10	0	6	0	0	Yes.	Yes.	400	Yes.	10,200	0	.....	.....	0	1032
138	0	25	0	10	0	13	Yes.	Yes.	1,000	No..	41,000	0	0	40,000	0	1033
0	40	0	39	0	0	4	Yes.	No..	2,000	Yes.	.....	.....	.....	.....	.....	1034
15	0	5	0	3	0	4	No..	Yes.	200	.....	15,100	0	0	3,000	0	1035
15	4	....	....	0	0	0	No..	No..	250	Yes.	10,000	0	0	1,800	0	1036
35	0	15	0	12	0	8	No.	No..	1,000	Yes.	25,700	0	.....	2,000	0	1037
5	8	....	....	4	3	3	.....	.....	.....	Yes.	6,000	15,000	.....	.....	1,000	1038
60	60	0	0	10	4	8	No..	No..	500	No..	13,000	18,000	800	850	1,000	1039
18	12	2	2	2	0	2	No..	No..	417	Yes.	14,064	0	165	1,929	0	1040
0	26	0	0	0	0	0	Yes.	No..	592	Yes.	19,610	0	1,713	550	0	1041
41	39	1	0	0	0	1	No..	No..	475	No..	6,181	250	325	735	15	1042
0	30	0	2	0	0	2	No..	.....	.....	.....	.....	.....	.....	.....	.....	1043
0	90	0	10	0	0	12	No..	Yes.	.....	Yes.	35,250	0	0	.....	0	1044
140	0	50	0	8	0	12	No..	Yes.	300	Yes.	75,500	.....	.....	.....	.....	1045
3	10	1	5	0	0	2	No..	No..	0	Yes.	.....	.....	.....	2,500	.....	1046
24	24	.....	.....	.....	.....	3	No..	No..	500	Yes.	15,500	.....	.....	.....	.....	1047
109	101	20	10	15	2	18	Yes.	No..	1,400	No..	61,209	40,000	500	4,000	2,000	1048
63	59	9	3	0	0	12	Yes.	No..	400	Yes.	10,500	.....	1,025	900	.....	1049
0	36	0	0	0	0	3	No..	Yes.	700	Yes.	250	0	0	6,830	0	1050
21	0	6	0	2	0	3	No..	No..	0	Yes.	200	.....	.....	2,230	.....	1051
18	3	6	1	14	0	6	No..	No..	300	Yes.	.....	.....	.....	4,050	.....	1052

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TABLE 9.—*Statistics of endowed academies, seminar*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of pupils.	
					Male.	
	1	2	3	4	5	6
	NEW YORK—cont'd.					
1053	Rochester	Livingston Park Seminary.	Mrs. C. M. Curtis	0	0	
1054	....do	Mrs. Nichols's School, (77 Fitzhugh street).	Mrs. S. J. Nichols	Nonsect	0	
1055	....do	Wagner Memorial Lutheran College (4-6 Oregon street).	J. Steinhaesuer, pastor.	Luth	4	
1056	Romè	St. Peter's Academy	Sister of the Holy Family. Superior.	R. C	0	
1057	Rondout	Ulster Academy	Wm. E. Bunten		2	
1058	Roslyn	The Bryant School	E. Hinds	Nonsect	2	
1059	Sag Harbor	Academy Sacred Heart of Mary.	Sister Basile	R. C	0	
1060	Salem	St. Paul's Hall	Rev. J. H. Houghton, A. M.	Epis	5	1
1061	Saratoga Springs	Saratoga Institute	F. B. Yates		2	1
1062	Saugerties	Saugerties Institute	Wm. Wight	Nonsect	1	3
1063	Stuquoit	Stuquoit Academy	Noah Leonard	0	1	1
1064	Sherwood	Sherwood Select School.	Miss A. L. Tierney		0	3
1065	Sing Sing	Dr. Holbrook's Military School.	Rev. D. A. Holbrook	0	6	0
1066	....do	St. John's School	Rev. J. B. Gibson, D.D., rector.	Epis	6	0
1067	Sodus	Sodus Academy	Elisha Curtiss	0	2	
1068	Stamford	Stamford Seminary	O. J. Blakesley, B. S		2	
1069	Stapleton	Staten Island Academy and Latin School	Fred. E. Hartington	Nonsect	2	1
1070	Suspension Bridge	De Veaux College	Reginald H. Coe, A. B	Epis	5	1
1071	Syracuse	St. John's Catholic Academy.	Very Rev. J. S. M. Lynch, D. D. V. G.	R. C	1	
1072	Tarrytown	Misses Bulkleys' School.	Misses Bulkley		1	4
1073	Tivoli	Trinity School	Jas. Starr Clark, D. D.	P. E	6	1
1074	Troy	Troy Academy	F. C. Barnes	Nonsect	4	0
1075	....do	Troy Female Seminary (85 Second street).	Miss Emily T. Wilcox.	Nonsect	1	3
1076	Union Springs	Friends Academy	Chas. H. Jones	Friends	2	1
1077	Verona	The Home School	Mrs. T. Foster and Miss Toll.		1	1
1078	Walworth	Walworth Academy	A. H. McMurray	Nonsect	1	3
1079	West Chester	Boys' Boarding School	B. T. Harrington	P. E	4	0
1080	....do	Sacred Heart Academy.	Brother August	R. C	7	0
1081	White Plains	Alexander Institute	Oliver R. Willis	Presb	3	1
1082	Wilton	Wilson Seminary	John Anthony	Meth	1	1
1083	Yonkers	English, French and German Day School	Miss Emma Herzog	Nonsect	1	2
1084	....do	Yonkers Military School	Ezra B. Faucher, A. M.	Presb	2	2
	NORTH CAROLINA.					
1085	Albemarle	Albemarle Academy	J. H. Bivins	Nonsect	1	2
1086	Ansonville	High School	W. H. Pope		1	1
1087	Augusta	Augusta Seminary	J. D. Hodges, A. M	Meth	1	1
1088	Belmont	St. Mary's College	Rev. Julius Pohl, O.S.B.	R. C	9	0
1089	Belvidere	Belvidere Academy	Miss M. J. White	Friends	0	2
1090	Bingham School	Bingham School	Robert Bingham	Nonsect	7	0
1091	Bethany	Bethany Academy	Alva C. English	Luth	1	0
1092	Burlington	Holt's School	Rev. Jeremiah W. Holt.	Christian	1	1
1093	Caldwell Institute	Caldwell Institute	J. H. McCrachen	Nonsect	1	2
1094	Cana	Cana Academy	W. S. Carmichael	Bapt	1	0
1095	Cedar Grove	Cedar Grove Academy	Rev. G. B. Game	Nonsect	1	2
1096	Cedar Hill	Cedar Hill Academy	Miss Lillie Lea	M. E. So	0	1
1097	Charlotte	Macon School	W. A. Barrier	Nonsect	2	0
1098	Chocowinity	Trinity School	N. C. Hughes, D. D.	Epis	3	2
1099	Clinton	Clinton Male Academy	Rev. J. W. Turner	Nonsect	1	0

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nd other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	25	0	10	0	15	8	No..	No..	800	Yes.	$35,100	0	0	$2,000	0	1053
0	36	0	2	0	0	7	No..	No..	300	Yes.	7,150	0	0	2,200	0	1054
40	0	0	0	0	0	9	Yes.	No..	350	No..	25,000	$4,000	0	1,000	0	1055
0	40	----	----	----	----	0	No..	No..	250	Yes.	20,045	0	------	------	0	1056
76	82	4	1	2	0	24	Yes.	No..	980	Yes.	45,330	------	$614	564	------	1057
15	0	14	0	0	0	0	Yes.	Yes.	500	Yes.	75 250	0	------	------	0	1058
0	25	----	----	0	0	4	No..	No..	------	Yes.	14,000	------	------	------	------	1059
40	0	20	0	20	0	4	No..	Yes.	300	No..	15,050	0	------	------	0	1060
30	0	----	----	0	0	0	No..	Yes.	300	Yes.	30,000	------	------	------	------	1061
20	30	2	10	18	20	0	No..	No..	0	Yes.	6,000	0	------	1,430	0	1062
30	8	----	----	0	0	0	No..	No..	258	Yes.	3,917	0	146	1,065	0	1063
17	9	----	----	0	0	1	Yes.	No..	------	Yes.	16,400	0	------	------	------	1064
65	0	20	0	15	0	5	No..	Yes.	1,000	Yes.	31,000	0	0	------	0	1065
30	0	----	----	----	----	8	No..	Yes.	1,000	------	75,000	------	------	------	------	1066
40	30	1	0	3	2	6	Yes.	No..	283	Yes.	1,239	0	898	950	0	1067
65	50	7	5	4	3	15	Yes.	No..	2,150	Yes.	12,400	------	------	------	------	1068
21	18	2	0	10	0	0	Yes.	Yes.	3,700	Yes.	17,400	0	110	12,800	0	1069
45	0	12	0	8	0	7	No..	Yes.	2,000	Yes.	100,753	120,000	------	0	------	1070
15	35	6	0	0	0	0	No..	No..	1,500	Yes.	41,000	0	------	300	$50	1071
0	30	----	----	0	0	2	------	------	500	------	------	------	------	------	------	1072
50	5	7	3	10	0	8	No..	Yes.	400	------	40,250	------	------	20,000	------	1073
33	0	9	0	15	0	5	No..	No..	621	Yes.	17,561	0	38	4,003	------	1074
0	74	0	0	0	5	4	------	Yes.	1,758	Yes.	10,172	0	197	5,299	198	1075
17	11	5	8	11	5	6	Yes.	Yes.	1,800	Yes.	42,400	10,000	0	------	500	1076
5	10	----	----	0	0	1	------	------	300	No..	5,000	------	------	300	------	1077
23	33	0	1	0	0	1	Yes.	No..	200	No..	8,750	800	------	------	48	1078
18	0	9	0	2	0	1	No..	Yes.	1,200	No..	35,000	0	0	3,000	0	1079
70	0	15	0	20	0	14	Yes.	Yes.	1,000	Yes.	300,000	0	0	22,000	0	1080
15	0	9	0	0	0	0	No..	Yes.	1,000	No..	25,600	0	------	2,000	0	1081
8	10	1	2	1	0	0	No..	No..	150	Yes.	5,000	0	0	700	0	1082
2	14	2	6	0	3	6	Yes.	No..	600	No..	32,000	------	------	5,000	------	1083
22	0	10	0	5	0	2	No..	Yes	------	Yes.	25,250	------	------	------	------	1084
25	30	10	15	0	0	12	No..	No..	200	Yes.	1,000	------	------	1,200	600	1085
1	6	----	----	----	----	----	No..	No..	0	Yes.	6,000	------	------	------	------	1086
12	14	8	7	7	4	0	No..	No..	350	Yes.	3,050	2,000	------	1,200	1,000	1087
104	0	----	----	0	0	4	No..	No..	1,500	Yes.	1,000	------	------	------	------	1088
2	5	----	----	0	0	1	No..	No..	------	------	1,000	------	------	319	100	1089
183	0	40	0	40	0	6	No..	Yes.	------	No..	30,000	------	------	12,000	------	1090
6	13	0	0	0	0	0	No..	No..	0	Yes.	900	95	------	------	0	1091
16	19	----	----	0	0	0	No..	No..	0	Yes.	30	------	------	400	------	1092
20	25	10	10	8	10	0	Yes.	No..	100	Yes.	3,025	200	------	2,500	160	1093
2	3	0	0	1	2	0	No..	No..	0	Yes.	1,000	------	105	200	105	1094
18	23	6	6	0	0	0	No..	No..	0	Yes.	3,000	------	------	800	1,500	1095
1	8	1	4	0	0	0	No..	No..	0	Yes.	200	------	------	------	------	1096
20	0	10	0	4	0	3	No..	No..	100	Yes.	1,515	------	------	1,300	------	1097
19	10	15	0	0	0	3	No..	No..	0	Yes.	3,000	------	------	------	------	1098
10	0	10	0	----	----	----	No..	No..	0	Yes.	700	------	------	------	------	1099

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TABLE 9.—*Statistics of endowed academies, seminar*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Male.	
	1	2	3	4	5	6
	NORTH CAROLINA—continued.					
1100	Como	Buckhorn Academy	Julian H. Picot, LL. D.	Nonsect	1	
1101	Concord	Concord Male School	J. P. Cook			
1102	....do	Scotia Seminary	Rev. D. J. Satterfield, president.	Presb	1	
1103	Conover	Concordia College	Rev. R. A. Yoder, A. M.	Luth	4	
1104	Conway	High School	Paul J. Long	Nonsect	1	
1105	Denver	Denver Academy	Chas. L. Coon	0	1	
1106	Elizabeth City	Elizabeth City Academy	S. L. Sheep		2	
1107	Enochville	Enochville Academy	Rev. W. A. Lutz, A. M.	Luth	1	
1108	Farmville	Farmville Seminary	W. E. Mewborn	Nonsect	1	
1109	Fork Church	Fork Academy	J. T. Alderman		2	
1110	Franklin	High School	Thos. C. Reese	Meth	2	
1111	Franklinton	Classical Institute	Chas. N. Finnell	Nonsect	1	
1112	....do	Female Academy	Miss L. V. Morris	0	0	
1113	Fremont	Hand School	W. H. Hand	Nonsect	4	
1114	Gastonia	....do	W. F. Marshall	Nonsect	2	
1115	Germanton	Germanton Institute	W. B. Harris	0	1	
1116	Gibsonville	Fairview Academy	Wm. T. Whitsett, superintendent.	Nonsect	1	
1117	Gold Hill	Bethany Academy	L. H. Rothrock	0	1	
1118	Greenville	Female Institute	John Duckett	Nonsect	1	
1119	Harlowe	Harlowe Academy	Miss S. Tempe Betts	Meth	0	
1120	Hayesville	Male and Female College.	H. P. Bailey	M. E. So	2	
1121	Henderson	Male Academy	W. V. Savage	Nonsect	1	0
1122	Hendersonville	Judson College	Richard H. Lewis	Bapt	2	4
1123	High Point	Female College	J. N. Stallings, D. D.	Bapt	3	3
1124	Hillsboro	Select School	Miss A. C. Heartt		0	2
1125	Holly Spring	Holly Spring Academy	C. F. Siler	Nonsect	2	2
1126	Huntersville	High School	Rev. W. W. Orr, A. M., president.	Nonsect	2	0
1127	Huntley	Salem High School	Geo. E. Butler	Bapt	2	1
1128	Jackson	Male Academy	J. W. Fleetwood	Nonsect	1	0
1129	Kinston	Kinston College	F. A. Millidge	Nonsect	2	2
1130	Leicester	Leicester Academy	H. F. Ketron, A. M.	M. E	1	1
1131	Lenoir	Lenoir Academy	E. L. Barnes	Nonsect	2	1
1132	Lexington	Lexington Seminary	W. J. Scroggs, A. M	Nonsect	2	2
1133	Lincolnton	Piedmont Seminary	D. M. Thompson, A. M.	Nonsect	1	1
1134	Marshallberg	Graham Academy	W. Q. A. Graham, A. B	M. E	2	2
1135	Moffitts Mills	Shiloh Academy	J. R. Miller	Christian	1	1
1136	Mooresville	Mooresville Academy	Hugh A. Grey, jr	Presb	1	2
1137	....do	Oak Institute	R. B. Clarke, A. M	Meth	1	1
1138	Moravian Falls	Moravian Falls Academy.	G. W. Greene	Bapt	2	0
1139	Morehead City	Swindell's School	J. H. Swindell	Nonsect	1	1
1140	Mount Holly	High School	Brevard Nixon	Nonsect	1	1
1141	Mount Pleasant	Female Seminary	Rev. J. A. Linn, A. M	Luth	1	3
1142	Newbern	Collegiate Institute	G. T. Adams		5	3
1143	Norwood	High School	R. L. Smith, PH. B.	Nonsect	1	2
1144	Oakdale	Oakdale Academy	J. M. Anderson	Nonsect	1	0
1145	Oak Ridge	Oak Ridge Institute	J. A. and M. H. Holt	Nonsect	5	2
1146	Oxford	Horner School	Horner and Drewry		5	0
1147	Pineville	Carolina Academy	L. Shurley	Nonsect	1	2
1148	Pleasant Garden	Pleasant Garden Academy.	W. E. Fentress, PH. B.	Nonsect	2	0
1149	Raleigh	Male Academy	Morson & Denson	Nonsect	2	0
1150	....do	St. Mary's School	Miss E. D. Battle	P. E	1	5
1151	Rise	Dover Academy	Jos. O. Dixon	Nonsect	1	1
1152	Rock Rest	Rock Rest Academy	H. E. Copple	Baptist	1	1
1153	Scotland Neck	Vine Hill Male Academy	William C. Allen	Nonsect	2	0
1154	Seaboard	Seaboard and Roanoke Institute.	W. C. Parker		1	1
1155	Snow Hill	Greene Academy	Jas. B. Williams	Nonsect	2	1
1156	Statesville	Home School	Mrs. Fannie Morrow	Nonsect	0	2

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d other private secondary schools for 1889-90—Continued.

Students in condary rade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
90	0	10	0	5	0	20	No..	Yes.	4,000	Yes.	$1,000	$1,000	.....	$1,000	.....	1100
15	0	3	0	0	0	0	No..	No..	0	.....	1,000	.....	$200	600	.....	1101
0	30	.....	.....	0	0	16	No..	No..	1,000	Yes.	30,050	4,800	.....	.....	$5,530	1102
10	21	16	5	0	0	5	No..	No..	300	Yes.	5,400	.....	.....	1,500	.....	1103
15	3	3	0	0	0	0	No..	No..	0	Yes.	300	.....	93	200	250	1104
12	13	2	2	0	0	0	No..	No..	100	.....	.....	.....	.....	850	.....	1105
50	45	12	20	3	0	12	No..	No..	100	Yes.	5,050	.....	.....	3,000	.....	1106
18	12	10	10	0	0	0	No..	No..	.....	Yes.	400	.....	.....	450	.....	1107
15	10	.....	.....	0	0	0	No..	No..	50	Yes.	2,500	.....	70	700	.....	1108
10	12	10	8	0	0	10	No..	No..	200	Yes.	2,050	.....	.....	.....	.....	1109
40	30	30	10	0	0	0	No..	No..	.....	Yes.	3,050	.....	.....	1,200	.....	1110
14	0	3	0	4	0	0	No..	No..	0	.....	.....	.....	.....	.....	.....	1111
0	20	0	5	.....	.....	.....	No..	No..	0	Yes.	1,500	.....	130	350	.....	1112
01	0	15	0	12	0	8	No..	Yes.	250	Yes.	6,000	.....	150	5,000	250	1113
18	20	.....	.....	0	0	0	No..	No..	0	.....	600	.....	.....	1,300	.....	1114
4	6	3	4	0	0	2	No..	No..	0	Yes.	1,000	.....	62	600	.....	1115
20	25	10	15	10	10	25	No..	No..	50	Yes.	.....	.....	.....	.....	.....	1116
12	8	0	0	0	0	0	No..	No..	0	Yes.	500	.....	161	80	80	1117
25	40	4	2	0	0	7	No..	No..	100	Yes.	10,000	.....	.....	2,500	2,900	1118
18	24	.....	.....	0	0	0	No..	No..	.....	.....	.....	.....	.....	.....	.....	1119
25	25	10	10	0	0	0	No..	No..	0	Yes.	4,000	.....	135	700	.....	1120
30	0	5	0	0	0	0	No..	No..	30	No..	2,500	.....	.....	1,100	.....	1121
47	43	25	15	0	0	0	No..	No..	100	Yes.	15,030	.....	.....	.....	.....	1122
25	33	0	33	0	0	3	No..	No..	1,000	Yes.	15,400	.....	.....	4,000	.....	1123
2	3	.....	.....	0	0	0	.....	.....	.....	Yes.	.....	.....	.....	.....	.....	1124
34	30	11	9	0	0	3	No..	No..	50	Yes.	.....	.....	.....	1,000	.....	1125
31	19	20	6	0	0	13	No..	No..	100	Yes.	6,000	10,000	200	1,575	800	1126
12	11	.....	.....	0	0	6	No..	No..	.....	Yes.	.....	.....	.....	1,000	.....	1127
10	0	1	0	0	0	0	No..	No..	0	No..	800	.....	.....	250	.....	1128
30	30	.....	.....	0	0	0	No..	No..	75	Yes.	3,600	.....	.....	1,500	.....	1129
16	8	.....	.....	4	1	0	No..	No..	0	Yes.	3,000	.....	.....	450	150	1130
22	0	.....	.....	5	0	0	No..	No..	150	Yes.	2,000	.....	.....	500	30	1131
17	23	8	7	3	0	0	Yes.	.....	300	Yes.	8,000	.....	.....	2,800	.....	1132
15	10	2	5	0	0	0	No..	No..	150	Yes.	6,000	.....	.....	1,100	.....	1133
20	18	.....	.....	0	0	0	No..	No..	60	Yes.	1,000	.....	.....	295	150	1134
18	17	0	0	0	0	0	No..	No..	.....	Yes.	1,030	.....	90	.....	.....	1135
15	15	7	5	2	0	0	No..	No..	0	Yes.	450	.....	132	1,368	.....	1136
18	9	10	5	1	0	1	No..	No..	0	Yes.	2,500	.....	92	800	.....	1137
40	30	10	1	3	0	6	No..	No..	200	Yes.	1,500	.....	100	400	.....	1138
6	11	0	0	0	0	0	No..	No..	0	Yes.	.....	.....	.....	.....	.....	1139
6	4	5	2	1	1	0	No..	No..	0	Yes.	2,000	.....	150	570	.....	1140
0	58	.....	.....	0	0	3	.....	.....	250	Yes.	4,030	.....	.....	.....	.....	1141
60	65	.....	.....	0	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	1142
20	24	.....	.....	0	0	0	No..	No..	50	Yes.	1,000	.....	155	800	.....	1143
3	4	.....	.....	0	0	0	No..	No..	0	Yes.	400	.....	160	250	.....	1144
10	15	75	10	15	0	10	No..	No..	2,000	Yes.	13,000	.....	.....	7,000	1,000	1145
94	0	40	20	20	0	12	No..	No..	70	.....	20,000	.....	.....	4,500	.....	1146
20	10	10	5	4	0	0	No..	No..	.....	Yes.	520	.....	180	600	.....	1147
6	10	.....	.....	0	0	0	No..	No..	50	Yes.	1,000	.....	.....	.....	.....	1148
60	0	25	0	15	0	15	No..	No..	0	Yes.	4,200	.....	.....	3,500	.....	1149
0	100	0	0	0	0	13	.....	.....	1,000	.....	50,300	.....	.....	15,000	.....	1150
6	2	5	1	0	0	0	No..	No..	0	Yes.	600	.....	.....	.....	.....	1151
17	15	.....	.....	0	0	0	No..	No..	25	Yes.	400	.....	.....	.....	.....	1152
38	0	6	0	0	0	0	No..	No..	0	Yes.	5,000	.....	.....	1,179	.....	1153
7	1	4	1	0	0	0	No .	No..	0	Yes.	.....	.....	.....	.....	.....	1154
5	7	2	2	0	0	0	No..	No..	0	Yes.	300	.....	.....	500	.....	1155
0	30	0	0	0	0	0	No..	No..	400	Yes.	4,000	.....	.....	.....	.....	1156

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TABLE 9.—*Statistics of endowed academies, semi-*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of Teachers: Male	
	1	2	3	4	5	
	NORTH CAROLINA—continued.					
1157	Statesville	Statesville College	Miss Fannie E. Walton, president.	Presb	0	
1158	Sterling	Bloomingdale High School.	J. P. Price	Baptist	1	
1159	Summerfield	High School	J. A. Bowles	Nonsect	1	
1160	Sutherland	Sutherland Seminary	Miss Emma Wynn	Nonsect	0	
1161	Thomasville	Female College (male annex).	Frank H. Curtiss, president.	Nonsect	2	
1162	Toisnot	Barnes School	Mrs. W. S. Barnes		0	
1163	Trap Hill	Fair View Academy	Joel F. Smith	Meth	1	
1164	Vashti	Cedar Run Academy	John J. Hendren	Nonsect	2	
1165	Viola	Cane Tuck Academy	Miss Rosa Kenan	Baptist	0	
1166	Warsaw	High School	L. S. Cannon	Baptist	1	
1167	Washington	School for Boys and Girls.	H. H. Hamblin	Nonsect	1	
1168	Wilmington	Cape Fear Academy	Washington Catlett	0	2	
1169	....do	English and Classical School.	Daniel Morrelle	P. E	1	
1170	Wilson	Male Academy	E. L. Middleton, A. B		2	
1171	Winton	Chowan Academy	C. S. Brown	Baptist	1	
1172	Woodland	Grange High School	N. W. Britton	Nonsect	1	
	NORTH DAKOTA.					
1173	Arvilla	Arvilla Academy and Normal School.	J. A. Brown	Nonsect	2	
1174	Grand Forks	St. Bernard's Ursuline Academy.	Mother Stanislaus	R. C	0	
1175	Jamestown	Jamestown College	Rev. H. G. Mendenhall	Presb	1	
	OHIO.					
1176	Austinburg	Grand River Institute	Rev. R. G. McClelland	Nonsect	4	
1177	Barnesville	Friends' Boarding School.	J. H. Dewees	Friends	2	
1178	Central College	Central College Academy.	M. H. Frank	Presb	1	
1179	Cherry Fork	North Liberty Academy.	Prof. Seaton	U. Presb	1	
1180	Cincinnati	Collegiate School	Rev. J. Babin, A. B	Nonsect	1	
1181	....do	Eden Park School for Girls.	Madame Fredin	0	0	
1182	Cincinnati, Walnut Hills.	Miss Fisher's School, (NE. corner McWilliam st. and Madison road).	Miss F. Eugenia Fisher.	Nonsect	0	
1183	Cincinnati	Franklin School (Walnut Hills).	White and Sykes	0	2	
1184	....do	Mount Auburn Classical and English School (196 Auburn ave.).	J. C. Wyckoff, A. M	Nonsect	3	
1185	....do	Mount Auburn Young Ladies' Institute.	H. Thane Miller, president.	Nonsect	2	
1186	....do	St. Francis Gymnasium	Rev. Jerome Kilgenstein, O. S. T.	R. C	7	
1187	....do	St. Mary's Institute	Sisters Julia	R. C	0	
1188	....do	School for Girls (31 Bellevue ave., Mount Auburn).	Miss K. M. Lupton		0	
1189	....do	Young Ladies' Literary Institute (E. 6th st).	Sister M. Borgia	R. C	0	
1190	Cleveland	Miss Brown's School for Girls.	Miss A. H. Brown	Nonsect	1	

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other private secondary schools for 1889–90—Continued.

u- ats n nd- ry ade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	102	----	----	----	----	----	------	------	400	------	$25,000	-------	-------	-------	-------	1157
17	5	5	0	3	0	0	No..	No..	------	Yes.	¢80	-------	-------	$350	-------	1158
6	10	5	3	0	0	0	No..	No..	0	Yes.	2,525	-------	-------	-------	-------	1159
2	7	3	1	0	0	0	No..	No..	------	Yes.	500	-------	$90	-------	-------	1160
10	15	2	2	0	0	0	Yes.	Yes.	0	Yes.	14,000	-------	-------	2,500	-------	1161
0	6	----	----	0	0	0	No..	No..	------	Yes.	600	-------	-------	500	-------	1162
13	3	2	0	4	1	0	No..	No..	300	Yes.	1,500	-------	50	115	-------	1163
20	4	----	----	0	0	0	No..	No..	0	Yes.	1,000	-------	100	300	-------	1164
1	3	----	----	----	----	----	Yes.	No..	------	------	-------	-------	-------	-------	-------	1165
15	18	4	6	4	2	0	No..	No..	100	Yes.	4,000	-------	-------	1,850	-------	1166
4	2	2	0	0	0	0	No..	No..	------	------	700	-------	-------	320	-------	1167
67	0	30	0	6	0	4	No..	Yes.	105	Yes.	7,100	-------	-------	2,200	-------	1168
17	9	6	9	2	0	6	No..	No..	2,000	Yes.	5,300	-------	-------	-------	-------	1169
36	0	10	0	0	0	0	----	----	------	------	2,500	-------	-------	1,500	-------	1170
4	3	0	0	0	0	0	No..	No..	100	Yes.	3,500	-------	175	86	$747	1171
9	1	2	1	0	0	2	No..	No..	0	Yes.	800	-------	-------	400	-------	1172
	20	30	4	8	24	22	0	Yes.	No..	500	Yes.	6,250	-------	648	1,500	50	1173
	8	11	----	----	----	19	0	Yes.	------	500	Yes.	25,000	-------	-------	-------	700	1174
	8	27	6	0	0	0	0	Yes.	No..	300	Yes.	25,000	-------	-------	507	2,172	1175
	47	58	3	0	0	0	8	No..	Yes.	600	No..	12,400	$32,400	0	1,293	23,400	1176
	41	29	0	0	0	0	2	No..	No..	600	Yes.	40,500	8,000	0	-------	500	1177
	18	8	9	3	0	0	4	No..	No..	500	No..	5,100	0	-------	450	500	1178
	20	0	20	0	0	0	4	No..	No..	20	No..	1,000	0	0	0	0	1179
	18	0	----	----	0	0	0	No..	No..	0	Yes.	100	-------	-------	2,800	-------	1180
	0	60	0	0	0	0	0	No..	No..	700	Yes.	35,000	-------	-------	10,000	-------	1181
	0	20	2	6	0	0	0	No..	No..	300	Yes.	35,000	-------	-------	5,000	-------	1182
	45	0	15	0	15	0	0	No..	No..	300	Yes.	15,000	-------	-------	-------	-------	1183
	12	0	10	0	2	0	0	No..	Yes.	------	Yes.	-------	-------	-------	-------	-------	1184
	0	75	----	----	0	0	10	No..	Yes.	4,300	Yes.	150,000	-------	-------	-------	-------	1185
	60	0	----	----	0	0	9	No..	No..	------	------	7,000	-------	-------	500	100	1186
	0	40	----	----	0	0	0	Yes.	No..	7,000	Yes.	-------	-------	-------	-------	-------	1187
	3	40	0	6	0	0	5	No..	Yes.	4,000	Yes.	60,000	-------	-------	6,000	-------	1188
	0	50	----	----	0	0	6	No..	No..	------	------	-------	-------	-------	-------	-------	1189
	0	30	0	10	0	0	1	Yes.	------	500	Yes.	-------	-------	-------	12,805	-------	1190

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Male.	
	1	2	3	4	5	6
	OHIO—continued.					
1191	Cleveland	Miss Mittleberger's English and Classical School.	Augusta Mittleberger (Miss).	Nonsect	0	
1192	Columbus	Miss Phelps's English and Classical School for Young Ladies (151 E. Broad st.).	Miss L. M. Phelps	Epis	1	5
1193	Damascus	Damascus Academy	Henry H. Goddard, A. M.	Friends	3	
1194	Dayton	St. Mary's Institute	Rev. Jos. Weckesser	R. C	3	0
1195	Ewington	Ewington Academy	F. F. Vale, A. M	Nonsect	1	1
1196	Fostoria	Classical Academy	W. L. Mathers	U. Brethren.	3	1
1197	Gallipolis	Gallia Academy	A. B. Dunlap, PH. B	Nonsect	1	1
1198	Gambier	Harcourt Place Seminary.	Miss Ada I. Ayer, A.B.	Epis	0	4
1199	do	Kenyon Military Academy.	Lawrence Rust, LL. D., rector.	P. E	5	0
1200	Greenfield	Normal School	Rev. Robert Story		1	1
1201	Green Spring	Green Spring Academy.	Morris J. Hole, M. S., A. B.	Nonsect	4	
1202	Harlem Springs	Harlem Springs College	John R. Steeves	M. E	2	3
1203	Hudson	Western Reserve Academy.	Newton B. Hobart	Nonsect	4	1
1204	Middlepoint	Western Ohio Normal School.	R. Schuyler Morgan		6	2
1205	Minster	St. Mary's Institute	Sister M. Salesia	R.C	0	2
1206	Mt. Vernon	St. Vincent de Paul's School.	Rev. L. W. Mulhane	R.C	0	3
1207	New Hagerstown	New Hagerstown Academy.	J. Howard Brown		2	0
1208	Oxford	Western Female Seminary.	Miss L. S. McKee	Presb	0	11
1209	Perrysville	Green-Town Academy	J. C. Sample, A. M	Nonsect	2	1
1210	Portsmouth	Ohio Military Academy.	Col. A. L. Bresler	Nonsect	6	0
1211	Reading	Mount Notre Dame Academy.	Sister Agnes Aloysia	R.C	0	4
1212	Rogers	Mount Hope Academy	A. Y. Taylor	Nonsect	2	3
1213	St. Martin's	Ursuline Academy for Young Ladies.	Sister M. Baptista	R.C	0	7
1214	Savannah	Savannah Academy	J. W. Bowlus	Nonsect	2	4
1215	South New Lyme	New Lyme Institute	J. Tuckerman, PH.D., A. M.		4	3
1216	South Salem	Salem Academy	E. H. Frank	Presb	1	1
1217	Springfield	Springfield Seminary	Miss S. R. Longwell	Nonsect	0	4
1218	Steubenville	Female Seminary	Rev. A. M. Reid	Presb	2	5
1219	Tiffin	College of Ursuline Sisters.	Sister Ignatius	R.C	0	2
1220	West Farmington	Farmington College	Rev. E. B. Webster, A. M.	M. E	9	2
1221	Zanesville	Putnam Classical Institute.	Rev. S. M. Glenn, A. M.	Presb	1	3
	OREGON.					
1222	Albany	Collegiate Institute	Rev. E. N. Condit, president.	Presb	3	2
1223	Baker City	St. Francis Academy	Sister Mary Augustine		0	2
1224	Dallas	La Creole Academic Institute.	Thomas C. Bell, A. M	Nonsect	1	2
1225	Forest Grove	Tualatin Academy	D. L. Edwards	Cong	2	1
1226	Milton	Milton Academy	G. W. Colcord		3	0
1227	Mount Angel	Mount Angel Academy	Mother M. Bernardine	R. C	0	3
1228	Newberg	Friends Pacific Academy.	Edwin Morrison	Friends	1	1
1229	Pendleton	St. Joseph's Academy	Sister Mary Stanislaus	R. C	0	2

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ıd other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	75	0	6	0	0	13	No..	Yes.	1,000	.....	$30,000	.....	.....	.....	.....	1191
0	150	0	89	0	0	10	Yes.	Yes	500	Yes.	60,225	.....	.....	.....	.....	1192
31	36	.....	.....	0	0	5	No..	No..	100	Yes.	2,300	$4,000	.....	$1,400	$550	1193
50	0	0	0	50	0	3	Yes.	Yes.	3,000	Yes.	.....	.....	.....	.....	.....	1194
20	12	2	1	2	0	0	No..	No..	25	No..	1,000	0	0	250	0	1195
31	20	.....	.....	0	0	0	No..	No..	1,000	Yes.	41,500	.....	.....	.....	.....	1196
34	10	4	2	0	0	0	.....	.....	2,000	Yes.	5,500	12,000	.....	775	900	1197
0	60	0	5	0	1	7	No..	Yes.	160	No..	50,500	0	.....	12,000	0	1198
87	0	50	0	37	0	16	No..	Yes.	0	No..	60,200	0	0	0	0	1199
14	8	3	0	1	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	1200
40	25	13	1	11	12	7	No..	Yes.	150	No..	20,300	0	0	759	1,596	1201
35	27	5	2	8	2	0	No..	No..	1,000	Yes.	15,000	0	0	1,000	0	1202
52	10	52	10	0	0	17	No..	Yes.	900	No..	49,000	3,000	0	2,200	3,100	1203
183	82	0	0	0	0	19	No..	No..	200	.....	1,975	0	.....	.....	0	1204
0	10	0	0	0	0	0	No..	Yes.	200	Yes.	20,000	.....	.....	2,300	.....	1205
14	26	1	0	4	9	9	Yes.	No..	200	Yes.	15,600	0	.....	500	12,080	1206
17	8	3	1	0	0	0	.....	.....	100	No..	1,000	.....	.....	.....	.....	1207
0	155	0	19	0	18	9	Yes.	No..	5,050	No..	116,000	29,500	0	22,000	12,065	1208
60	40	20	2	0	0	0	No..	No..	1,200	No..	5,500	0	0	800	0	1209
29	0	18	0	0	0	0	Yes.	Yes.	500	Yes.	40,040	.....	.....	4,000	150	1210
0	65	0	0	0	0	2	Yes.	.....	1,000	Yes.	.....	0	0	0	0	1211
40	50	25	20	15	30	6	No..	No..	400	Yes.	10,400	0	0	3,150	0	1212
0	58	.....	.....	0	0	4	No..	No..	6,000	Yes.	76,500	0	.....	12,000	0	1213
90	77	0	0	0	0	3	No..	No..	650	No..	5,500	2,500	.....	1,800	800	1214
90	71	14	6	0	0	6	No..	No..	550	.....	15,000	.....	.....	.....	.....	1215
25	20	8	5	0	0	4	No..	No..	700	No..	2,600	.....	.....	1,050	60	1216
6	43	0	0	3	0	1	No..	Yes.	50	Yes.	100	0	0	4,000	0	1217
0	36	.....	.....	0	0	5	No..	Yes.	5,000	Yes.	41,000	0	0	3,000	0	1218
0	25	.....	.....	0	0	5	No..	Yes.	700	Yes.	600	.....	.....	.....	.....	1219
150	50	.....	.....	0	0	14	No..	No..	300	No..	18,000	2,800	.....	.....	.....	1220
4	35	.....	.....	0	0	4	No..	Yes.	6,000	Yes.	12,000	10,000	.....	.....	600	1221
28	29	20	21	0	0	1	No..	Yes.	2,700	Yes.	41,500	.....	.....	3,100	.....	1222
0	20	0	15	0	0	2	No..	.....	350	Yes.	4,110	.....	.....	.....	30	1223
20	12	0	0	0	0	4	No..	No..	300	Yes.	7,525	3,500	.....	620	440	1224
35	37	9	4	8	14	12	No..	Yes.	6,000	No..	50,200	100,000	.....	.....	9,000	1225
30	40	.....	.....	0	0	0	No..	No..	.....	.....	12,050	.....	.....	3,000	.....	1226
0	37	0	0	0	0	4	Yes.	.....	150	Yes.	30,150	.....	.....	425	.....	1227
17	15	2	3	4	2	8	Yes.	No..	200	Yes.	5,650	0	0	2,000	50	1228
0	24	.....	.....	0	0	5	Yes.	.....	100	Yes.	10,500	.....	.....	500	.....	1229

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TABLE 9.—*Statistics of endowed academies, semi-*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of Students: Male.
	1	2	3	4	5
	OREGON—cont'd.				
1230	Portland	Bishop Scott Academy	J. W. Hill	P. E	8
1231	....do	Portland Academy	J. R. Wilson	0	2
1232	....do	St. Helen's Hall	Miss M. B. Rodney	P. E	0
1233	....do	St. Michael's College	Bro. Michael	R. C	6
1234	The Dalles	Wasco Independent Academy.	Will C. Ingalls	Nonsect	1
1235	Wilbur	Umpagua Academy	R. M. Conkling	M. E	2
	PENNSYLVANIA.				
1236	Allegheny	School for Girls	Miss M. Maitland	Nonsect	0
1237	Ambler	Sunnyside School	Miss S. A. Knight	0	0
1238	Barkeyville	Barkeyville Academy	John F. Bigler, A. B.		2
1239	Beattys	St. Xavier's Academy	Sisters of Mercy	R. C	0
1240	Beaver	Beaver College and Musical Institute.	Rev. R. L. Taylor, A. M., D. D.	M. E	2
1241	Bethlehem	Bishopthorpe School for Girls.	Miss Fanny I. Walsh	Epis	0
1242	....do	Moravian Parochial School.	Rev. Chas. B. Shultz	Moravian	4
1243	....do	Preparatory School for Lehigh University.	Wm. Ulrich	Nonsect	5
1244	Birmingham	Mountain Seminary	Miss N. J. Davis	Presb	0
1245	Blairsville	Blairsville Seminary	Rev. T. R. Ewing, D. D.	Presb	3
1246	Bustleton	St. Luke's Boarding School for Boys.	Chas. A. Strout, A. M.	Epis	5
1247	Chambersburg	Chambersburg Academy	M. R. Alexander	Presb	6
1248	Chester	Chester Academy	George Gilbert		2
1249	Concordville	Maplewood Institute	Joseph Shortlidge	Nonsect	2
1250	Darlington	Greersburg Academy	Frank A. Judd	Nonsect	1
1251	Dayton	Glade Run Classical and Normal Academy.	G. W. Mechlin		2
1252	....do	Union Academy	D. W. Lawson, A. M		2
1253	Dry Run	Dry Run Academy	E. E. Pawling		2
1254	Duncannon	Duncannon Academy	Thos. W. Stalford, A. B.		2
1255	Eldersridge	Eldersridge Academy	W. B. Kelly	Presb	2
1256	Ercildoun	Ercildoun Academy	G. W. Moore		2
1257	Erie	St. Benedict's Academy	Sister M. Clara	R. C	0
1258	Factoryville	Keystone Academy	David W. Brown	Bapt	7
1259	Fredericksburg	Schuykill Seminary	Rev. G. Holzapfel, A. M	Evan	6
1260	Germantown	Boarding, Day and College Preparatory School.	Miss Mary E. Stevens	Epis	6
1261	....do	Germantown Academy	William Kershaw, PH. D.	Nonsect	6
1262	Greensburg	Greensburg Seminary	Geo. E. Merkley	Luth	4
1263	Harrisburg	The Misses Tomkinson's School.	Miss M. M. Tomkinson	0	0
1264	Huntington Mills	Huntington Mills Academy.	J. W. Hayman	Nonsect	1
1265	Jefferson	Monongahela College	Solomon F. Hogue, president.	Bapt	4
1266	Jenkintown	Abington Friends Boarding and Day School.	Arthur H. Tomlinson	Friends	2
1267	Kennett Square	Martin Academy	J. H. Painter	Friends	1
1268	Kingston	Wyoming Seminary	Rev. L. L. Sprague, D. D., president.	M. E	17
1269	Lancaster	The Yeates Institute	Montgomery R. Hooper.	P. E	3
1270	Langhorne	Friends Institute	Cassandra H. Rice	Friends	0
1271	Ligonier	Classical Institute	Rev. E. H. Dickenson	Presb	1
1272	McAlevy's Fort	Stone Valley Academy	Preston R. Dry, A. B.	Nonsect	2
1273	McDonald	Ingleside Academy	Rev. W. D. Irons		3

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ther private secondary schools for 1889–90—Continued.

ıd- / le.	Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department.	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Female.	Male.	Female.	Male.	Female.											
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	20	0	25	0	10	Yes.	Yes.	1,000	Yes.	$150,000	$10,000	0	$6,500	$1,400	1230
24	10	0	6	5	0	No..	No..	300	Yes.	10,600	0	.....	2,634	600	1231
49	----	----	0	0	0	.....	.....	800	.....	.....	.....	.....	.....	.....	1232
0	16	0	4	0	16	No..	No..	500	Yes.	100,600	0	.....	.....	0	1233
33	----	----	0	0	0	Yes.	No..	0	Yes.	25,000	0	0	2,812	900	1234
6	4	6	2	1	0	Yes.	Yes.	160	Yes.	2,540	0	$890	540	600	1235
10	----	----	0	0	0	No..	No..	.....	Yes.	.....	.....	.....	.....	.....	1236
18	0	0	0	0	0	Yes.	No..	150	Yes.	.....	.....	.....	.....	.....	1237
32	5	5	20	20	7	No..	Yes.	400	Yes.	10,000	.....	.....	1,700	150	1238
20	----	----	0	0	5	Yes.	.....	600	Yes.	.....	.....	.....	.....	.....	1239
35	----	----	0	0	7	No..	No..	1,280	No..	51,000	.....	.....	6,900	3,200	1240
35	0	1	0	0	0	No..	Yes.	1,000	Yes.	30,000	.....	.....	.....	.....	1241
20	1	0	6	0	17	Yes.	No..	100	Yes.	31,500	.....	.....	2,968	4,909	1242
0	12	0	56	0	52	No..	No..	2,400	Yes.	15,800	.....	.....	7,800	.....	1243
71	0	5	0	0	12	No..	Yes.	.....	Yes.	30,000	.....	.....	.....	.....	1244
54	----	----	0	0	7	Yes.	Yes.	800	Yes.	25,500	0	0	0	0	1245
0	8	0	8	0	8	No..	Yes.	500	Yes.	35,000	0	0	20,000	0	1246
0	40	0	10	0	4	No..	No..	500	Yes.	20,200	0	0	2,000	0	1247
26	3	0	7	0	2	Yes.	No..	500	Yes.	15,300	.....	.....	4,500	.....	1248
0	4	0	0	0	0	.....	.....	2,000	.....	31,000	.....	.....	.....	.....	1249
31	3	0	1	0	2	No..	No..	0	Yes.	3,530	0	.....	712	0	1250
16	0	0	0	0	0	No..	No..	300	No..	1,300	0	.....	.....	0	1251
25	0	0	28	25	2	No..	No..	500	Yes.	600	.....	.....	275	.....	1252
8	3	1	1	2	0	No..	No..	.....	Yes.	2,100	0	0	1,000	0	1253
14	1	1	1	0	1	No..	No..	0	Yes.	0	0	0	867	0	1254
15	6	3	0	0	6	No..	No..	600	No..	2,000	0	0	1,000	0	1255
20	0	0	0	0	0	No..	No..	100	Yes.	6,100	0	0	.....	0	1256
15	0	0	0	3	3	No..	No.	500	Yes.	75,000	.....	.....	5,000	.....	1257
99	25	3	20	28	15	No..	Yes.	3,300	No..	101,000	0	0	3,000	5,000	1258
35	2	0	0	0	11	No..	No..	700	Yes.	50,300	0	.....	2,943	2,400	1259
100	0	24	0	0	15	Yes.	Yes.	2,000	Yes.	.....	.....	.....	.....	.....	1260
0	50	0	80	0	30	Yes.	Yes.	500	Yes.	126,000	0	.....	.....	2,500	1261
41	14	3	1	0	0	No..	No..	0	No..	20,000	0	.....	3,684	1,000	1262
28	----	----	3	9	3	Yes.	No..	300	Yes.	400	0	0	3,300	0	1263
12	0	0	1	0	12	No..	No..	300	Yes.	2,200	0	0	700	0	1264
28	7	5	12	0	0	No..	Yes.	500	Yes.	20,300	0	0	2,100	0	1265
25	0	2	3	2	7	Yes.	No..	100	Yes.	200,150	30,000	.....	4,200	1,500	1266
28	----	----	0	0	4	Yes.	No..	0	Yes	3,100	15,000	0	1,200	800	1267
210	45	15	35	0	21	Yes.	No..	3,000	No..	201,000	25,000	.....	16,300	1,200	1268
0	10	0	2	0	1	Yes.	Yes.	300	Yes.	15,150	.....	.....	600	.....	1269
16	15	10	3	7	0	No..	No..	.....	Yes.	3,100	9,000	0	900	540	1270
11	5	1	0	6	4	No..	No..	.....	No..	.....	0	.....	550	.....	1271
17	1	0	8	6	1	No..	No..	500	No..	1,000	0	0	700	0	1272
48	18	0	----	0	12	No..	No..	.....	.....	.....	.....	.....	1,500	.....	1273

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TABLE 9.—*Statistics of endowed academies, etc.*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	
	1	2	3	4	5
	PENNSYLVANIA—continued.				
1274	Media	Brooke Hall Female Seminary.	S. C. Shortlidge, A. M.	Epis	1
1275	Mercersburg	Mercersburg College	Geo. W. Aughinbaugh, D. D.	Reformed	3
1276	Meyersdale	Preparatory School	John D. Meese, M. PH.	Nonsect	1
1277	Millville	Greenwood Seminary	Miss E. H. Cutler	Friends	6
1278	Mount Pleasant	Western Pennsylvania Classical and Scientific Institute.	Leroy Stephens, A. M., D. D., president.	Bapt	2
1279	Muddy Creek Forks.	Pleasant Grove Academy.	James Yeats	Presb	1
1280	Myerstown	Palatinate College	Rev. Wm. C. Schaeffer, PH. D., president.	Reformed	6
1281	Nazareth	Nazareth Hall	Eugene Leibert	Moravian	6
1282	New Bloomfield	Bloomfield Academy	J. M. Arnold, A. M.	Nonsect	2
1283	New Lebanon	McElwain Institute	C. N. Moore	Nonsect	3
1284	North East	St. Mary's College	Rev. Jos. M. Schwarz, rector.	R. C	7
1285	North Hope	North Washington Academy.	Prof. D. R. Sumstine, A. B.	Nonsect	1
1286	North Wales	North Wales Academy and School of Business.	S. U. Brunner	Nonsect	5
1287	Oakdale Station	The Oaks	Anson J. Dill, PH. D	Nonsect	3
1288	Ogontz	Cheltenham Academy	John C. Rice, A. M	Nonsect	5
1289	Oley	Oley Academy	H. S. Bowers	Nonsect	3
1290	Oxford	Oxford Academy	Miss Anna F. Webb	Nonsect	0
1291	Parkesburgh	Parkesburg Academy	James A. Clarke	Presb	2
1292	Pennsburg	Perkiomen Seminary	James H. Griffith, PH. B.	Nonsect	1
1293	Philadelphia	Academy of the Protestant Episcopal Church (1324 Locust st.).	J. W. Robins, D. D., head master.	P. E	6
1294	....do	Boarding and Day School (4112 Spruce st.).	E. F. Gorden		1
1295	....do	Cooper's School for Young Ladies (4117 Walnut street).	Misses Annie and Sarah Cooper.		0
1296	....do	English, French and Music School (1700 Green street).	Miss Harriet Boyer	Nonsect	0
1297	....do	The Forsythe School, (2122 Locust street).	John E. Forsythe	Nonsect	6
1298	....do	French and English Home School (4313 Walnut street).	Miss Henriette V. Clerc, Marion L. Pecke.	Epis	0
1299	....do	Friends' Central High School (15th and Race streets).	George L. Maris and Miss Annie Shoemaker.	Friends	9
1300	....do	Friends (Orthodox) Select School (140 N. 16th street).	J. Henry Bartlett, superintendent.	Friends	3
1301	....do	Miss Gibson's School (2106 Spruce street).	Miss M. L. Gibson	Nonsect	1
1302	....do	Girard College for Orphans.	Adam H. Fetterolf, LL. D., president.	0	5
1303	....do	Miss Irwin's School (2011 De Lancey place).	Miss Agnes Irwin	0	2
1304	....do	Martin's School for Boys (3903 Locust street).	Geo. F. Martin		3

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ıer private secondary schools for 1889-90—Continued.

ı- ·.	Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
remale.	Male.	Female.	Male.	Female.											
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
40	----	----	----	----	----	------	------	600	------	$50,000	------	------	------	------	1274
15	----	----	0	0	12	No..	No..	------	Yes.	30,000	------	------	------	------	1275
56	6	2	5	12	12	Yes.	No..	125	Yes.	2,050	------	------	$1,200	------	1276
26	0	0	0	0	0	No..	No..	0	Yes.	2,000	------	------	------	------	1277
11	14	2	2	0	3	No..	No..	1,600	No..	30,250	0	------	3,000	$4,000	1278
17	3	1	4	0	0	No..	No..	6	No..	3,010	0	0	600	0	1279
25	0	0	0	0	8	No..	No..	1,000	No..	20,300	------	------	------	------	1280
0	3	0	0	0	9	Yes.	No..	5,000	Yes.	52,000	0	0	5,000	0	1281
22	8	0	3	3	3	No..	No..	600	No..	6,600	------	------	1,100	------	1282
50	0	0	0	0	2	No..	No..	800	Yes.	------	------	------	------	------	1283
0	----	----	0	63	12	No..	No..	4,500	No..	15,238	0	------	2,000	0	1284
10	0	7	3	0	3	No..	No..	100	Yes.	800	------	------	------	------	1285
14	6	4	6	0	4	No..	No..	800	No..	12,500	0	------	0	0	1286
40	10	0	12	0	4	No..	No..	150	Yes.	15,000	------	------	2,640	85	1287
0	10	0	10	0	6	Yes.	Yes.	1,000	Yes.	101,000	0	0	------	0	1288
13	16	3	0	0	0	No..	No..	800	Yes.	3,000	$2,000	0	0	120	1289
42	8	10	0	0	8	No..	No..	0	Yes.	2,150	0	0	1,600	0	1290
17	3	0	0	0	0	No..	No..	0	------	------	------	------	------	------	1291
10	7	0	0	0	3	No..	No..	------	Yes.	$3,000	------	------	800	------	1292
0	----	----	0	0	0	Yes.	Yes.	1,200	Yes.	------	------	------	------	------	1293
60	----	----	0	0	0	No..	No..	------	------	------	------	------	------	------	1294
40	0	6	0	0	2	Yes.	No..	------	Yes.	------	------	------	------	------	1295
30	0	1	0	0	2	No..	No..	1,000	Yes.	------	------	------	5,000	------	1296
0	0	0	0	0	1	Yes.	Yes.	93	Yes.	175,000	0	------	17,275	5,000	1297
21	----	----	0	0	16	No..	------	3,000	No..	------	------	------	7,000	------	1298
370	0	4	6	1	45	Yes.	Yes.	500	Yes.	102,500	------	------	42,300	------	1299
87	0	0	0	0	6	Yes.	Yes.	12,000	Yes.	------	------	------	------	------	1300
30	----	----	0	0	5	No..	No..	------	Yes.	------	------	------	------	------	1301
0	0	0	0	0	28	Yes.	No..	10,000	Yes.	3265000	8400000	------	------	1050000	1302
100	0	4	0	0	11	Yes.	No..	1,200	Yes.	------	------	------	------	------	1303
0	10	0	15	0	14	No..	Yes.	1,000	Yes.	20,000	------	------	9,000	------	1304

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	PENNSYLVANIA—continued.					
1305	Philadelphia	Mount St. Joseph's Academy (Chestnut Hill).	Sisters of St. Joseph	R.C	0	7
1306	....do	North Broad Street Select School for Young Men and Boys (700 N. Broad street).	George Eastburn, A. M., PH. D.	Nonsect	8	0
1307	....do	Rittenhouse Academy	De Benerville K. Ludwig.	0	7	0
1308	....do	Rugby Academy	Caleb Allen	Nonsect	8	1
1309	....do	School for Boys (401 S. 22d street).	Wm. S. Blight, jr	0	4	0
1310	....do	School for Girls (5012 Elm avenue).	Mrs. L. M. B. Mitchell	0	0	4
1311	....do	West Green Street Institute.	Miss Martha Laird	Luth	1	5
1312	....do	West Walnut Street Seminary (2045 Walnut street).	Mrs. Henrietta Kutz	Presb	0	6
1313	....do	William Penn Charter School.	Richard M. Jones, M. A., head master.	Friends	4	0
1314	Pittsburg	Ursuline Young Ladies' Academy.	Sister Gertrude Burns	R.C	0	4
1315	Pleasant Mount	Pleasant Mount Academy.	Miss H. M. Miller, M. D.	0	1	2
1316	Pottstown	Normal Institute	A. H. Herbst		1	1
1317	Prospect	Normal and Classical Academy.	F. W. Magee, A. M.	Nonsect	1	1
1318	Purchase Line	Purchase Line Academy.	D. R. Houk, reporting officer.	Nonsect	1	0
1319	Reading	Selwyn Hall	Wm. J. Wilkie	P. E	4	0
1320	Reidsburg	Reid Institute	Austin W. Nichols, M.D.	Bapt	1	2
1321	Riegelsville	Riegelsville Academy	James R. Lewis A. B.	Nonsect	1	1
1322	Rimesburg	Clarion Collegiate Institute.	Rev. W. Wilberforce Deatrick, A. M.	Reformed	3	2
1323	Scranton	The Green Ridge School	Misses Snyder		0	4
1324	....do	School of the Lackawanna.	Rev. Thomas W. Conn and Walter H. Buell.	Presb	4	4
1325	Selins Grove	Missionary Institute (classical department).	J. R. Dimm, A. M., D. D.	Luth	6	1
1326	Sewickley	Sewickley Academy	John Way, jr	Nonsect	5	3
1327	Springtown	Springtown Academy	M. L. Horne	Nonsect	1	0
1328	Stewartstown	English and Classical Institute.	John E. Bahn	Nonsect	2	0
1329	Sugar Grove	Sugar Grove Seminary	Rev. R. J. White	U. Breth	1	4
1330	Towanda	Susquehanna Collegiate Institute.	Edwin E. Quinlan, A. M.	Presb	4	4
1331	Uniontown	Redstone Academy	Jas. H. Griffith	Nonsect	2	1
1332	Ward	Ward Academy	Benj. F. Leggett, A. M., PH. D.	Meth	1	2
1333	Washington	Trinity Hall	Rev. P. S. Mesny, M. A.	P. E.	3	0
1334	Waterford	Waterford Academy	J. R. Greene, A. B	Nonsect	2	3
1335	West Chester	Darlington Seminary for Young Ladies.	Richard Darlington	Friends	2	5
1336	West Philadelphia.	Hamilton School	Leroy B. Peckham, head master.	Nonsect	5	0
1337	West Sunbury	West Sunbury Academy.	Thos. E. Moffatt	Nonsect	2	2
1338	Wilkesbarre	Harry Hillman Academy.	Edwin L. Scott, A. M. PH. D.	Nonsect	4	0
1339	Williamsport	Dickinson Seminary	Edward J. Gray, president.	M. E	7	8

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	60	....	....	0	0	10	.....	No..	3,000	Yes.	$100,200	.....	.....	.....	.....	1305
120	0	24	0	20	0	17	No..	Yes.	500	Yes.	3,000	.....	.....	.....	.....	1306
51	0	40	0	0	0	12	No..	Yes.	0	Yes.	500	0	0	$6,000	0	1307
78	0	30	0	34	0	9	No..	Yes.	0	Yes	100	0	0	13,000	0	1308
28	0	27	0	0	0	4	Yes.	No..	.....	Yes.	20,000	0	0	0	0	1309
0	18	0	4	0	0	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1310
0	36	0	0	0	0	2	Yes.	.....	.....	.....	.....	.....	.....	.....	.....	1311
0	38	....	....	0	0	6	No..	No..	1,000	Yes.	41,000	0	0	0	0	1312
100	0	100	0	0	0	30	Yes.	Yes.	600	Yes.	121,000	.....	.....	42,757	.....	1313
0	25	0	0	0	25	5	Yes.	No..	200	.....	250,000	.....	.....	10,000	$10,000	1314
10	15	....	....	0	0	2	No..	No..	200	.....	2,600	.....	.....	800	.....	1315
36	22	17	0	0	0	0	No..	No..	.....	.....	.....	.....	.....	.....	.....	1316
25	16	....	....	0	0	10	No..	No..	100	No..	1,500	.....	.....	1,120	.....	1317
15	19	0	0	0	0	0	.....	.....	.....	Yes.	1,500	.....	.....	.....	.....	1318
25	0	10	0	10	0	0	No..	No..	500	Yes.	15,050	.....	.....	10,500	.....	1319
17	40	17	40	....	....	....	Yes.	No..	400	Yes.	6,000	.....	.....	.....	.....	1320
20	24	4	2	0	0	1	No..	No..	1,000	Yes.	8,000	$3,000	0	1,280	250	1321
39	38	11	2	0	0	1	Yes.	No..	500	Yes.	6,325	0	0	1,050	0	1322
8	18	2	1	0	0	0	No..	No..	.....	Yes.	2,500	.....	.....	2,000	.....	1323
76	30	33	8	16	0	0	No..	No..	.....	Yes.	.....	.....	.....	.....	.....	1324
56	13	33	2	2	9	12	No..	No..	4,500	Yes.	25,250	0	0	0	0	1325
35	25	10	10	0	0	0	No..	No..	600	Yes.	30,500	0	0	0	0	1326
15	6	2	0	0	0	0	No..	No..	30	Yes.	1,500	.....	.....	.....	.....	1327
25	18	3	0	12	15	15	No..	No..	0	Yes.	2,050	0	0	890	0	1328
33	42	....	....	0	0	10	Yes.	No..	1,200	No..	20,100	0	.....	2,350	300	1329
49	30	....	....	0	0	13	.....	No..	1,000	No..	52,000	10,000	.....	3,100	12,000	1330
12	13	0	0	0	0	10	No..	No..	0	Yes.	6,025	0	0	1,500	0	1331
7	6	....	....	0	0	1	Yes.	No..	100	Yes.	3,500	.....	.....	1,200	.....	1332
15	0	4	0	0	0	0	.....	Yes.	500	Yes.	100,000	.....	.....	.....	.....	1333
70	45	20	5	50	40	6	No..	No..	2,000	Yes.	50	.....	.....	.....	270	1334
0	50	0	2	0	3	10	No..	Yes.	700	Yes.	25,500	.....	.....	.....	600	1335
40	0	20	0	15	0	1	Yes.	Yes.	0	Yes.	.....	.....	.....	7,000	.....	1336
27	18	6	7	6	5	6	No..	No..	300	Yes.	8,100	.....	.....	1,550	.....	1337
46	0	15	0	31	0	15	Yes.	Yes.	.....	Yes.	42,000	.....	.....	.....	.....	1338
77	56	2	0	2	1	26	No..	Yes.	3,000	Yes.	100,000	.....	.....	.....	.....	1339

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	PENNSYLVANIA—continued.					
1340	Williamsport	Ladies' Classical Institute.	Miss J. M. Wilson	0	0	3
1341	Wyncote	Chelton Hills Select School.	Mrs. E. W. Heacock and Miss Annie Heacock.		1	6
	RHODE ISLAND.					
1342	Providence	English and Classical School.	Charles B. Goff, A. M.	Nonsect.	8	0
1343	....do	Friends' School	Augustine Jones	Friends	9	8
1344	....do	La Salle Academy	Brother James	R.C.	7	0
1345	....do	School for Young Ladies	Miss J. L. Abbott	Nonsect.	1	7
	SOUTH CAROLINA.					
1346	Anderson	Patrick Military Institute.	John B. Patrick	Nonsect.	7	0
1347	Charleston	Avery Normal Institute	Morrison A. Holmes	Cong	1	4
1348	....do	Female Seminary	Miss E. A. Kelly	Nonsect.	5	10
1349	....do	German School	C. H. Bergman	0	1	2
1350	....do	High School of Charleston.	Virgil C. Dibble	0	6	0
1351	....do	Porter Academy	Rev. A. T. Porter, D.D., rector.	P. E.	5	2
1352	....do	Private School	Mrs. I. A. Smith		0	5
1353	....do	University School	W. D. McKenney		2	0
1354	....do	Wallingford Academy	Rev. T. A. Grove	Presb	1	1
1355	Cokesbury	Conference School	C. C. Reed	M. E.	1	1
1356	Donaldsville	"The Donald's School"	J. E. Buzhardt	0	1	1
1357	Frogmore	Penn School, Normal and Industrial.	Miss Laura M. Towne, Miss Ellen Murray.	Nonsect.	0	2
1358	Greenwood	Male High School	Rufus B. Wilson	Nonsect.	2	1
1359	Kelton	Kelton Academy	E. R. Aycock	Nonsect.	2	0
1360	Kershaw	High School	Rev. G. A. Lowell	Nonsect.	1	1
1361	Kingstree	Kingstree Academy	M. M. Lander		1	1
1362	Lancaster	Franklin Institute	Chas. Lovejoy		1	1
1363	Leesville	English and Classical Institute.	Rev. L. E. Busby, A. M., president.	Nonsect.	3	5
1364	Manning	Collegiate Institute	S. M. Clarkson	Nonsect.	1	2
1365	Moffettsville	Moffettsville Academy	S. P. McElroy	Nonsect.	1	1
1366	Ninety-six	High School	J. C. Cork	Nonsect.	1	2
1367	O. K	Tabernacle High School	C. A. Plyler, jr	Meth	1	1
1368	Orangeburg	Sheridan Classical School.	Hugo G. Sheridan	Nonsect.	2	3
1369	Raymond	Limestone High School.	Miss Annie Inabuit		1	1
1370	Reidville	Female College	A. Spencer, A.M.	Presb	1	3
1371	....do	Male High School	A. Spencer, A.M.	Presb	2	1
1372	Sumter	Sumter Institute	Mrs. L. A. Browne and Miss E. E. Cooper.		0	7
1373	Townville	Townville Academy	Neil Macauley	Nonsect.	2	1
1374	Union	Clifford Seminary	Rev. B. G. Clifford	Nonsect.	1	4
1375	Williamston	Male High School	Earle Grady	Nonsect.	1	0
1376	Woodruff	Bethel Male and Female High School.	F. B. Woodruff	Presb	2	1
	SOUTH DAKOTA.					
1377	Canton	Augustana College	Anthony G. Tuve	Luth	3	3
1378	Scotland	Scotland Academy	John O. Duguid	Presb	3	3
1379	Sioux Falls	All Saints' School	Helen S Peabody	P. E	0	6
1380	....do	Sioux Falls University	E. B. Meredith	Bapt	3	3
1381	Yankton	Academy of the Sacred Heart.	Very Rev. Mother Gertrude Leapi, O.S.B.	R. C.	2	0

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	35	....	....	0	0	0	No..	No..	.....	No..	.....	.....	.....	.....	.....	1340
11	27	....	....	1	0	3	Yes.	No..	.....	Yes.	$20,000	.....	.....	.....	.....	1341
175	0	84	0	30	0	20	Yes.	Yes.	1,100	Yes.	100,400	0	0	$20,000	0	1342
88	111	10	2	0	0	16	No..	Yes.	6,000	Yes.	300,300	$2,000	.....	31,507	$8,000	1343
200	0	70	0	0	0	6	No..	No..	300	No..	50,000	.....	.....	.....	5,000	1344
0	57	0	1	0	1	10	No..	Yes.	400	Yes.	.....	.....	.....	.....	.....	1345
93	0	0	0	0	0	9	No..	No..	.....	Yes.	10,000	0	0	.....	0	1346
44	54	3	1	0	0	11	Yes.	No..	600	Yes.	25,050	0	0	2,250	28	1347
0	110	....	40	0	0	20	Yes.	Yes.	2,000	Yes.	30,000	.....	.....	.....	.....	1348
23	16	0	1	0	0	13	No..	Yes.	40	Yes.	6,990	0	0	1,794	0	1349
125	0	0	0	0	0	11	No..	Yes.	100	Yes.	15,500	.....	$4,000	5,600	.....	1350
120	0	0	0	25	0	0	Yes.	Yes.	1,200	No..	.....	.....	.....	.....	.....	1351
0	55	....	50	0	0	0	No..	No..	150	.....	.....	.....	.....	.....	.....	1352
40	0	.....	.....	0	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	1353
18	33	4	0	6	0	0	No..	No..	500	Yes.	1,300	0	.....	.....	.....	1354
8	7	8	7	0	0	0	No..	No..	0	Yes.	2,000	800	160	375	64	1355
20	18	2	14	22	0	0	No..	No..	0	Yes.	1,200	0	200	1,200	100	1356
24	12	0	0	0	0	7	Yes.	No..	200	Yes.	360	400	0	.....	544	1357
33	0	8	0	8	0	6	No..	No..	500	Yes.	4,000	0	200	1,800	0	1358
27	23	15	10	5	2	0	Yes.	No..	0	Yes.	1,000	0	150	600	250	1359
5	8	2	5	0	0	0	No..	No..	.....	.....	500	.....	5	4	.....	1360
23	12	3	5	0	0	0	No..	No..	0	Yes.	1,500	0	0	1,500	.....	1361
23	10	11	8	0	0	0	No..	No..	0	Yes.	3,500	.....	.....	1,400	.....	1362
63	27	0	0	0	0	0	Yes.	No..	400	Yes.	5,000	.....	131	800	.....	1363
36	20	10	9	0	0	0	No..	No..	0	Yes.	4,000	.....	75	4,000	1,500	1364
15	7	7	4	0	0	0	No..	No..	0	Yes.	430	0	226	770	0	1365
20	15	15	10	5	5	6	No..	No..	.....	Yes.	3,000	.....	500	1,500	150	1366
25	30	.....	.....	0	0	0	No..	No ..	.....	Yes.	1,000	100	100	500	.....	1367
46	25	16	9	8	5	11	No..	No..	.....	Yes.	4,000	.....	.....	3,000	.....	1368
7	8	3	2	0	0	2	No..	No..	0	.....	400	120	.....	.....	.....	1369
0	50	0	25	0	0	0	No..	No..	600	Yes.	15,500	0	.....	.....	0	1370
50	0	14	0	10	0	1	No..	No..	200	.....	5,000	0	.....	.....	0	1371
0	80	....	....	0	0	13	No..	.....	.....	.....	.....	.....	.....	.....	.....	1372
11	9	7	3	5	5	0	No..	No..	0	Yes.	525	0	165	700	.....	1373
1	30	.....	.....	0	0	7	No..	No..	.....	Yes.	5,100	.....	.....	.....	.....	1374
10	0	12	0	16	0	0	No..	No..	0	Yes.	2,600	0	125	.....	0	1375
20	10	3	2	0	0	0	No..	No..	0	Yes.	500	.....	240	.....	.....	1376
20	25	22	0	23	0	0	No..	No..	102	Yes.	10,020	0	0	670	0	1377
20	22	3	4	4	2	0	Yes.	No..	100	Yes.	9,000	0	279	761	1,023	1378
0	60	0	0	0	0	1	No..	No..	300	Yes.	75,000	0	.....	.....	0	1379
28	18	18	0	14	0	12	No..	Yes.	500	Yes.	50,500	0	0	3,000	0	1380
12	10	5	3	2	7	0	Yes.	Yes.	800	Yes.	60,600	1,000	.....	200	3,600	1381

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	TENNESSEE.					
1382	Alamo	Thompson's Classical Institute.	R. S. Thompson		1	0
1383	Bellbuckle	Webb School	W. R. J. M. Webb	M. E. So.	5	0
1384	Bells	Male and Female Academy.	M. Rose	Nonsect	1	1
1385	Bloomingdale	Kingsley Seminary	Joseph H. Ketron, A. M.	M. E.	3	1
1386	Bristol	Sullin's Female College.	Daniel S. Hearon	M. E. So.	2	7
1387	Carlock	Hoyle Institute	George Metcalfe	Nonsect	2	0
1388	Cedar Hill	Cedar Hill Academy	W. I. Harper	Nonsect	1	3
1389	Charleston	High School	M. R. Burke, A. M.	Nonsect	2	1
1390	Chattanooga	Caulkin's School	Wilford Caulkins, A. M.	0	1	2
1391	....do	Chattanooga College for Young Ladies.	John L. Cooper, A. M.	0	1	2
1392	Church Hill	Church Hill Academy	P. L. Henderson, A. B.	Nonsect	1	3
1393	Clarksville	Female Academy	Mrs. E. G. Buford	M. E. So.	0	2
1394	Clifton	Masonic Academy	D. C. Stunkard	Nonsect	2	1
1395	Clinton	High School	E. E. Foster, reporting officer.	Nonsect	1	1
1396	Columbia	University High School.	Henry J. Fusch	Nonsect	1	0
1397	Covington	Tipton Female Seminary.	George D. Holmes		1	4
1398	Culleoka	Culleoka Academy	Marvin West	M. E. So.	1	1
1399	Danceyville	Brownsville District High School.	W. A. Tanner	Meth	1	1
1400	Dayton	Masonic College	S. W. Tindell	0	2	3
1401	Decaturville	Decaturville Academy	J. F. Hughes	0	1	1
1402	Eagleville	Eagleville School	J. N. Huff	Bapt	1	5
1403	Elizabethtown	Davies Academy	E. B. Waller		1	2
1404	Evensville	Tennessee Valley College.	C. C. Ferguson	Nonsect	1	2
1405	Flag Pond	Flag Pond Seminary	W. T. Gillis	Bapt	1	1
1406	Floyds	Walnut Grove Academy	L. S. Fuller		2	1
1407	Gordonsville	Gordonsville Academy	N. L. Gold		0	2
1408	Grand View	Normal Institute	R. E. Dickson	Cong	2	4
1409	Greenfield	Greenfield Institute	J. B. Reed		2	2
1410	Howell	Howell Academy	Miss Sallie B. George	0	0	2
1411	Jacksboro	Franklin Academy	J. H. and M. G. Walker	Nonsect	4	1
1412	Kyles Ford	Blackwater Seminary	F. R. Sanderson	Bapt	2	1
1413	Lexington	Lexington Academy	S. A. Mynders, A. B.		1	2
1414	KcKenzie	McTyeire Institute	Joshua H. Harrison	Meth	2	2
1415	Memphis	Clara Conway Institute.	Miss Clara Conway	Nonsect	0	6
1416	....do	Memphis Institute	Wharton S. Jones	Nonsect	3	4
1417	....do	St. Agnes Academy	Sister Mary Thomas O'Meara.	R. C	0	4
1418	....do	St. Mary's School	Sister Superior	Epis	0	8
1419	Milan	College Schools	C. Ph. Kellogg, PH. D.		0	2
1420	Nashville	Montgomery Bell Academy.	S. M. D. Clark, A. M.	Nonsect	3	1
1421	....do	St. Cecelia Academy	Mother Ursula	R. C	0	8
1422	Newark	Walnut Grove Academy	D. L. Lansden	0	1	1
1423	Newbern	Union Male and Female Seminary.	C. S. Brown, jr., B. S.		1	2
1424	New Market	Holston Seminary	J. A. Kaull	M. E.	1	1
1425	....do	New Market Academy	W. C. Broady		1	3
1426	Orlinda	Normal Academy	D. B. Borthick	0	2	1
1427	Orysa	Hatch Academy	C. A. Folk	0	1	0
1428	Overall	Salem Academy	L. V. Ellington		1	1
1429	Paris	Male and Female Select High School.	T H. M. Hunter	0	1	3
1430	Parrottsville	High School	J. W. Lucas	Nonsect	1	2
1431	Partinville	Male and Female Institute.	Hugh W. Long	Nonsect	1	1
1432	Readyville	High School	V. M. Fulton	Nonsect	1	1

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
32	13	8	5	5	3	12	No..	No..	300	.....	$1,800	0	0	$1,200	.....	1382
226	13	217	0	9	0	17	No..	No..	1,400	No..	5,000	0	.....	14,765	0	1383
10	42	5	18	5	24	9	No..	No..	.....	Yes.	3,175	.....	.....	2,203	.....	1384
34	14	10	0	0	0	0	No..	No..	50	Yes.	2,400	0	$220	530	0	1385
...	100	...	100	0	0	8	Yes.	No..	500	Yes.	30,100	.....	.....	.....	.....	1386
3	3	2	3	0	0	0	No..	No..	100	Yes.	1,000	.....	200	600	.....	1387
20	16	0	0	0	0	0	No..	No..	0	Yes.	1,000	.....	500	800	.....	1388
15	10	...	...	0	0	0	No..	No..	0	Yes.	5,000	0	500	500	0	1389
21	13	17	10	0	0	1	No..	No..	300	Yes.	.....	.....	.....	3,000	.....	1390
0	25	0	20	0	6	0	Yes	Yes.	1,400	Yes.	20,300	0	.....	3,500	$400	1391
14	6	12	6	0	0	0	No..	No..	0	Yes.	3,000	.....	.....	.....	125	1392
0	54	0	10	0	2	10	Yes.	Yes.	133	.....	10,000	.....	0	3,500	54	1393
16	26	10	12	0	0	0	Yes.	No..	200	Yes.	3,000	.....	.....	1,467	.....	1394
17	13	4	1	2	0	17	No..	No..	.....	No..	2,500	.....	500	800	100	1395
15	0	15	0	0	0	3	No..	No..	0	No..	.....	.....	.....	1,905	.....	1396
3	102	0	0	0	0	5	No..	No..	200	Yes.	6,000	0	0	3,000	0	1397
10	12	...	...	0	0	0	No..	No..	1,500	Yes.	2,750	0	.....	.....	0	1398
10	8	4	3	0	0	0	No..	No..	0	Yes	3,000	0	0	800	0	1399
30	30	0	0	0	0	0	No..	No..	94	Yes.	8,000	0	1,000	1,000	0	1400
7	3	1	0	6	3	6	.....	.....	.....	.....	.....	.....	0	800	.....	1401
60	60	30	30	30	30	3	No..	No..	600	Yes.	2,650	0	300	3,000	0	1402
15	5	0	0	0	0	0	No..	No..	0	.....	.....	.....	0	800	.....	1403
20	16	12	8	9	7	0	No..	No..	150	Yes.	12,000	.....	.....	200	.....	1404
6	3	6	3	0	0	0	No..	Yes.	0	Yes.	1,000	.....	80	.....	.....	1405
50	20	20	5	15	3	0	No..	No..	0	.....	15,000	.....	500	600	.....	1406
8	6	2	0	1	1	0	No..	No..	150	.....	2,100	.....	400	350	.....	1407
14	9	2	2	2	0	0	Yes.	No..	400	Yes.	7,600	.....	180	600	.....	1408
20	24	3	5	0	0	0	No..	No..	0	.....	1,550	.....	650	1,500	.....	1409
18	12	...	...	0	0	0	No..	No..	0	Yes.	1,500	0	0	700	0	1410
100	80	10	5	10	10	4	No..	No..	0	Yes.	250	0	0	1,000	100	1411
27	17	9	5	5	2	6	No..	Yes.	.....	Yes.	1,525	$100	90	25	90	1412
30	25	15	10	0	0	0	No..	No..	1,200	Yes.	2,200	.....	.....	2,500	.....	1413
20	10	20	4	0	0	2	No..	No..	530	Yes.	9,000	0	.....	2,500	0	1414
0	69	0	7	0	1	19	Yes.	Yes.	1,200	Yes.	160	0	.....	7,500	0	1415
118	0	...	...	0	0	2	.....	.....	.....	Yes.	15,000	.....	.....	.....	.....	1416
0	25	0	0	0	15	6	No..	Yes.	3,000	Yes.	4,000	.....	.....	.....	.....	1417
0	100	...	...	0	0	0	No..	Yes.	.....	Yes.	30,000	.....	.....	.....	.....	1418
12	26	6	6	0	0	12	No..	No..	.....	Yes.	7,225	0	3,000	30	0	1419
70	0	4	0	66	0	5	No..	No..	310	Yes.	30,500	50,000	.....	4,800	3,000	1420
0	53	...	...	0	0	15	Yes.	.....	3,000	Yes.	100,000	.....	.....	.....	.....	1421
34	30	15	10	0	0	3	No..	Yes.	.....	Yes.	300	.....	105	.....	.....	1422
23	26	...	...	0	0	0	No..	No..	65	Yes.	7,540	0	1,410	1,440	0	1423
5	7	...	...	0	0	0	No..	No..	.....	Yes.	2,000	.....	150	.....	.....	1424
14	24	6	2	0	0	5	.....	No..	300	.....	4,500	.....	500	400	.....	1425
20	15	10	3	0	0	0	No..	No..	0	Yes.	2,500	.....	250	1,000	.....	1426
6	7	6	7	0	0	2	No..	No..	0	Yes.	200	.....	200	600	.....	1427
20	20	5	6	10	8	8	No..	No..	0	Yes.	1,000	.....	400	700	900	1428
23	27	4	6	10	0	0	Yes.	No..	0	.....	.....	.....	.....	.....	900	1429
13	7	0	0	...	...	0	Yes.	No..	0	Yes.	1,000	0	0	720	0	1430
10	3	7	3	1	2	0	No..	No..	65	Yes.	1,050	0	0	700	100	1431
53	20	18	6	12	16	6	No..	No..	700	Yes.	13,000	0	0	1,800	0	1432

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	TENNESSEE—cont'd.					
1433	Rutherford	Male and Female Academy.	J. Stanley Wilhelm	Nonsect	1	3
1434	Saltillo	Male and Female Academy.		0	1	3
1435	Savannah	Hardin College	J. A. Hanna		1	5
1436	Shelbyville	Dixon Academy	T. Stiles Bell		1	0
1437	Sneedville	McKinney High School	S. L. Carson	Nonsect	1	1
1438	Somerville	West Tennessee Military Academy.	E. A. Maddox	Nonsect	2	0
1439	Sparta	Andrew Jackson College	T. L. Mitchell	Nonsect	1	1
1440	Spring House	Sulphur Springs Academy.	Cummins C. Justus	Nonsect	2	0
1441	Stony Point	Maxwell Academy	R. M. Dewey	Presb	1	0
1442	Sweet Water	Female Institute	Thos. L. Bryan		1	2
1443	Sweet Water	Male College	J. L. Bachman	Nonsect	2	2
1444	Tiptonville	Male and Female Academy.	George Compton	Nonsect	1	1
1445	Trenton	Laneview Academy	J. W. Meadows	0	1	2
1446	Troy	Obion Normal College	Fred J. Page, L.I	0	0	2
1447	Union City	Crockett and Thomas School.	Crockett and Thomas		3	0
1448	Verona	Verona Academy	W. H. Beasley	Meth	1	1
1449	Virtue	Union High School	John P. Griffith, B.S., B.L.		2	0
1450	Washington College.	Washington College	J. W. C. Willoughby, president.	Presb	5	1
1451	Waverly	McAdow Seminary	W. E. Miller	Cum.Pres	2	2
1452	Well Spring	Powells Valley Seminary.	Ed. R. Ling	M.E	3	1
1453	White Pine	Edwards Academy	Rev. Mont. Groenendyke.	United B'n	2	1
1454	Williston	Williston Academy	T. T. Hardy	Nonsect	1	1
1455	Woodbury	Woodbury College	Alfred J. Brandon	Nonsect	3	4
	TEXAS.					
1456	Alto	Coöperative Educational Association.	J. B. Collins	Nonsect	1	2
1457	Austin	German English Academy.	O. G. Neuman	0	1	1
1458	Belton	Male Academy	Chas. H. Wedemeyer	0	2	3
1459	Bonham	Fannin College	E. C. Hudson		3	0
1460	....do	Masonic Female Institute.	W. D. Allen	Nonsect	2	4
1461	Brock	Olive Branch Collegiate Institute.	G. D. Adams		2	1
1462	Brownsville	Incarnate Word Academy.	Mother St. Ange		0	3
1463	Brownwood	Howard Payne College	A. J. Emerson, president.		3	3
1464	Cedar Hill	Central Institute	E. W. Dallas	0	2	1
1465	Chico	Lee College	W. J. Haggard		1	2
1466	Cold Springs	Cold Springs Academy	J. H. H. Ellis		2	2
1467	Commerce	Commerce College	H. P. Eastman		1	2
1468	Corpus Christi	Female College	J. D. Meredith	Nonsect	1	1
1469	Dangerfield	High School	B. C. Chrisman		1	2
1470	Galveston	Ursuline Convent	Mother St. Agnes	R. C	0	4
1471	Geneva	Geneva Academy	H. F. Killen	Nonsect	1	0
1472	Hearne	Hearne Academy	H. M. Williams	Baptist	1	1
1473	Jasper	Southeast Texas Male and Female College.	D. C. Peacock	0	3	2
1474	Kilgore	Alexander Institute	George J. Nunn, president.	M. E. So	1	4
1475	Lancaster	Masonic Institute	Ruluph Sebring		1	2

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
25	31	0	0	0	0	0	No..	.....	.....	Yes.	.....	.....	$300	.....	.....	1433
52	21	10	4	38	20	0	Yes.	No..	0	Yes.	$2,540	0	0	$1,600	0	1434
30	41	6	4	21	27	0	Yes.	No..	0	.....	6,140	0	0	2,100	.....	1435
20	4	15	0	0	0	10	No..	No..	0	No..	3,500	.....	.....	.....	.....	1436
8	7	3	1	5	4	0	No..	No..	0	Yes.	600	$100	140	220	$146	1437
49	0	49	0	0	0	0	No..	No..	0	Yes.	2,025	0	900	800	900	1438
40	35	.....	.....	.....	.....	.....	.....	.....	.....	Yes.	1,500	400	.....	.....	.....	1439
15	20	8	2	15	1	0	No..	No..	.....	Yes.	700	.....	120	.....	.....	1440
12	13	3	4	0	0	2	No..	No..	0	Yes.	2,000	0	0	1,250	0	1441
0	20	0	10	0	10	0	No..	No..	0	.....	2,500	0	0	800	.....	1442
101	0	64	0	0	0	4	.....	.....	.....	Yes.	7,125	.....	.....	1,500	.....	1443
15	10	0	0	0	0	0	No..	No..	0	Yes.	1,500	.....	500	600	.....	1444
30	24	12	7	0	0	0	No..	No..	0	Yes.	2,000	.....	.....	.....	.....	1445
35	33	18	17	17	16	2	Yes.	No..	1,000	Yes.	3,000	0	1,000	500	0	1446
40	34	5	2	0	0	0	No..	No..	0	.....	5,015	.....	.....	2,145	.....	1447
6	8	0	0	0	0	0	No..	No..	.....	No..	500	.....	275	.....	.....	1448
12	8	.....	.....	0	0	10	No..	No..	0	.....	600	.....	.....	100	.....	1449
40	38	26	26	0	0	8	No..	No..	800	Yes.	10,200	0	.....	1,000	700	1450
7	8	1	0	1	0	0	No..	No..	125	Yes.	8,035	0	450	1,700	0	1451
68	24	0	0	18	13	0	No..	No..	204	Yes.	3,500	.....	262	.....	250	1452
40	20	0	0	0	0	0	No..	No..	700	Yes.	5,300	0	340	700	0	1453
12	4	1	0	0	0	0	No..	No..	0	Yes.	1,000	.....	.....	800	.....	1454
90	50	15	8	45	14	1	No..	No..	0	Yes.	4,000	.....	.....	3,500	.....	1455
13	18	3	5	0	0	0	No..	Yes.	0	Yes.	1,500	0	390	270	0	1456
24	18	18	12	4	8	18	Yes.	Yes.	350	Yes.	.....	.....	.....	.....	.....	1457
34	4	0	0	0	0	0	No..	No..	0	Yes.	4,100	0	.....	1,650	0	1458
65	0	30	0	25	0	4	No..	No..	.....	Yes.	10,200	.....	637	3,000	.....	1459
0	50	0	40	0	10	6	No..	No..	300	Yes.	10,100	4,000	400	5,000	.....	1460
14	26	0	0	4	5	0	No..	No..	64	.....	2,418	.....	680	760	.....	1461
0	55	0	0	0	0	1	No..	Yes.	500	Yes.	55,200	.....	.....	3,000	.....	1462
52	46	0	0	0	0	0	.....	.....	50	.....	30,000	.....	.....	.....	.....	1463
33	27	10	15	0	0	0	No..	No..	100	Yes.	2,600	0	585	.....	0	1464
44	51	10	15	15	12	2	No..	No..	0	.....	3,000	.....	0	450	.....	1465
40	30	5	5	5	0	0	No..	No..	0	.....	2,000	.....	480	1,200	.....	1466
24	28	.....	.....	0	0	0	No..	No..	150	.....	3,150	.....	1,600	.....	.....	1467
0	50	0	25	0	25	9	No..	No..	0	Yes.	2,500	0	.....	.....	300	1468
20	15	3	2	0	0	13	No..	No..	.....	Yes.	8,000	.....	400	1,000	.....	1469
0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	350	.....	.....	.....	.....	1470
3	3	0	0	0	0	0	No..	No..	0	Yes.	500	.....	253	.....	.....	1471
7	4	1	0	3	2	0	Yes.	No..	150	Yes.	5,500	.....	.....	256	300	1472
20	18	.....	.....	.....	.....	.....	No..	No..	0	Yes.	6,000	.....	.....	.....	.....	1473
30	30	.....	.....	0	0	0	No..	No..	400	Yes.	11,750	0	320	2,800	0	1474
20	30	.....	.....	0	0	0	No..	No..	10	Yes.	2,555	.....	800	200	.....	1475

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	TEXAS—continued.					
1476	Laredo	Laredo Seminary	Miss W. E. Holding	M. E. So	1	1
1477	Marshall	Bishop College	S. W. Culver, A. M., president.	Baptist	2	2
1478	....do	Female Institute	H. M. Ivy		1	4
1479	Minden	Rock Hill Institute	G. I. Watkins and C. B. Turner.		3	0
1480	Moulton Institute.	Moulton Institute	N. H. Allis	Nonsect	2	3
1481	Omen	Summer Hill Select School.	A. W. Orr, per sec	Nonsect	4	3
1482	Plano	Plano Academy	M. C. Portman	0	2	2
1483	Plano	Plano Institute	W. F. Mister and J. B. Dodson.	Nonsect	1	2
1484	Rusk	Masonic Institute	B. A. Stafford, president.	0	2	0
1485	Salado	Thomas Arnold High School.	T. J. Witt, PH. B	0	2	2
1486	San Antonio	German-English School	William Barbeck	0	2	2
1487	....do	St. Mary's College	Rev. Francis Feith	R. C	3	0
1488	....do	San Antonio Academy	W. B. Seeley	0	3	1
1489	....do	Ursuline Academy	Sister M. Magdalen	R. C	0	5
1490	San Saba	San Saba College	George H. Hagan	Nonsect	0	2
1491	Sequin	Montgomery Institiute	Rev. N. B. Fuller	P. E	1	1
1492	Sherman	Sherman Institute	J. G. Nash, A. M., LL. D.	Bapt	3	2
1493	Springtown	Male and Female Institute.	B. F. Fronabarger	0	4	1
1494	Sulphur Springs	Central College	J. W. Adkisson, A. M	M. E. So	5	4
1495	Sunset	Sunset College	Bryant and Alexander	0	2	1
1496	Vernon	Jones's School	G. A. Jones	Meth	1	1
1497	Victoria	High School	Melvin Hix	Nonsect	1	1
1498	....do	Nazareth Academy	Mother Sister Claire	R. C	0	3
1499	....do	St. Joseph's College and Diocesan Seminary.	Rev. L. Wyer	R. C	3	0
1500	Walnut	Central College	T. W. Elliott	Nonsect	3	2
1501	Whitt	Seminary and Normal School.	J. N. Johnston	0	2	0
1502	Willis	Male and Female College.	George H. Stovall	Nonsect	2	0
	UTAH.					
1503	Fillmore	Millard Stake Academy	J. E. Heckman		2	1
1504	Logan	Brigham Young College.	James W. Tanner	L. D. S	5	1
1505	....do	New Jersey Academy	Miss S. E. DeGruff	Presby	1	1
1506	Mount Pleasant	Wasatch Academy	Miss Annie F. Handley.	Presby	0	3
1507	Ogden	Ogden Academy	H. W. Ring	Cong	1	4
1508	Ogden City	Ogden Military Academy.	C. L. Howard, superintendent.	Nonsect	5	1
1509	Provo	Proctor Academy	F. E. Merrill	Cong	1	3
1510	Salt Lake City	All Hallows College	Rev. J. B. Chataigner, D. S. D.	R. C	4	0
1511	....do	Later-Day Saints' College.	James E. Talmage, PH. D.	L. D. S	4	0
1512	....do	St. Mark's School	Rev. R. W. Plant	Epis	1	1
1513	....do	St. Mary's Academy	Sister Superior	R. C	0	8
1514	....do	Salt Lake Academy	Edward Benner	Cong	3	4
1515	....do	Salt Lake Collegiate Institute.	J. F. Willspaugh	Presby	1	2
1516	....do	Section of Utah University.	C. L. Baxter	Meth	2	1
	VERMONT.					
1517	Bakersfield	Brigham Academy	F. E. Parlin	Nonsect	2	2
1518	Barre	Goddard Seminary	D. L. Maulsby	Univ	4	6
1519	Burlington	Bishop Hopkins's Hall	Rev. Lucius M. Hardy	Epis	1	4

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and other private secondary schools for 1889-90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
22	118	14	27	0	0	0	Yes.	No..	300	Yes.	$50,125	$6,000	.....	.....	$14,000	1476
18	7	6	1	0	0	0	Yes.	No..	750	Yes.	50,400	0	.....	.....	0	1477
0	36	0	0	0	0	15	Yes.	No..	150	.....	20,150	.....	$1,500	.....	0	1478
24	14	4	4	20	10	3	No..	No..	150	.....	3,200	.....	378	$1.000	.....	1479
33	24	7	2	21	14	2	No..	No..	0	Yes.	2,500	.....	725	4,150	.....	1480
95	65	20	4	8	1	0	No..	No..	400	Yes.	3,500	.....	.....	4,000	.....	1481
50	40	0	0	0	0	0	No..	No..	100	Yes.	5,000	.....	723	1,677	.....	1482
29	36	4	5	3	2	5	No..	No..	200	Yes.	8,000	0	600	3,000	0	1483
10	18	....	....	0	0	6	No..	No..	300	Yes.	5,250	.....	2,000	300	100	1484
23	18	....	....	0	0	0	.....	.....	125	.....	22,000	.....	.....	4,000	.....	1485
34	25	....	....	0	0	0	Yes.	Yes.	250	Yes.	25,000	.....	.....	.....	.....	1486
70	0	11	0	20	0	7	Yes.	No..	2,000	Yes.	71,000	0	0	1,000	0	1487
35	0	3	0	10	0	7	No..	No..	.....	Yes.	8,000	0	.....	.....	.....	1488
0	65	0	0	0	0	0	No..	No..	350	.....	.....	.....	.....	.....	.....	1489
40	40	3	5	7	6	0	No..	No..	0	Yes.	5,050	.....	850	400	2,750	1490
0	19	0	2	0	0	2	No..	No..	750	Yes.	11,000	.....	.....	400	1,000	1491
0	50	0	50	0	0	12	No..	Yes.	800	Yes.	20,500	.....	.....	.....	.....	1492
40	25	....	....	0	0	3	No..	No..	300	Yes.	6,000	0	671	3,000	0	1493
50	40	0	0	0	0	16	No..	No..	500	Yes.	20,700	12,000	.....	4,700	1,200	1494
24	20	9	11	10	12	0	Yes.	No..	50	.....	700	.....	400	2,000	.....	1495
5	21	3	5	0	3	0	No..	No..	.....	Yes.	3,500	.....	.....	540	.....	1496
5	14	0	12	0	0	0	No..	No..	0	Yes.	5,000	0	800	1,200	0	1497
0	33	....	....	0	0	1	No..	No..	1,100	Yes.	15,000	.....	900	.....	.....	1498
20	0	....	....	0	0	0	No..	No..	500	Yes.	.....	.....	.....	.....	.....	1499
41	42	3	3	12	8	0	No..	No..	45	Yes.	4,800	.....	976	1,400	25	1500
20	25	12	13	10	10	0	Yes.	No..	400	.....	4,125	600	1,900	.....	.....	1501
35	34	10	15	10	10	7	No..	No..	.....	Yes.	10,000	0	800	3,200	0	1502
15	8	....	....	15	8	9	No..	No..	50	.....	6,020	.....	1,200	.....	.....	1503
50	50	0	0	0	0	0	Yes.	No..	500	.....	30,500	10,000	.....	4,300	14,500	1504
11	10	1	2	0	0	0	No..	Yes.	20	Yes.	9,560	.....	.....	100	.....	1505
24	16	....	....	0	0	0	.....	.....	.....	Yes.	15,000	.....	.....	103	.....	1506
52	0	....	....	5	0	4	Yes.	No..	100	Yes.	50,000	.....	.....	2,000	.....	1507
72	0	28	0	0	0	2	Yes.	.....	300	No..	55,000	.....	.....	.....	.....	1508
5	15	0	5	0	5	.....	No..	No..	300	Yes.	19,500	.....	.....	259	65	1509
30	0	12	0	6	0	10	No..	No..	100	Yes.	20,300	.....	.....	7,000	.....	1510
53	31	53	31	0	0	3	No..	No..	1,050	Yes.	2,000	.....	.....	3,908	2,030	1511
11	8	....	....	0	0	5	No..	No..	1,600	.....	.....	.....	.....	1,400	.....	1512
0	100	0	0	0	75	1	No..	No..	2,000	Yes.	100	.....	.....	.....	.....	1513
40	30	2	1	0	0	3	Yes.	Yes.	3,000	Yes.	100,200	4,000	.....	3,000	7,000	1514
21	29	11	3	3	2	7	Yes.	No..	485	Yes.	40,250	.....	.....	4,000	3,600	1515
8	15	....	....	0	0	2	No..	No..	.....	Yes.	100,000	.....	.....	1,400	2,600	1516
25	30	5	2	6	5	9	Yes.	No..	.....	No..	10,400	30,000	.....	452	2,250	1517
63	43	11	0	4	0	8	No..	No..	1,705	Yes.	65,250	20,000	92	3,500	2,495	1518
0	35	0	5	0	2	4	Yes.	Yes.	450	No..	150,000	20,000	.....	10,520	11,500	1519

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	VERMONT—cont'd.					
1520	Burlington	Vermont Episcopal Institute.	Henry H. Ross	P. E	4	1
1521	Essex	Classical Institute	Chauncey H. Hayden		1	3
1522	Lyndon Center	Lyndon Institute	Walter E. Ranger, A. M.	Nonsect	6	4
1523	Manchester	Burr and Burton Seminary.	Allan C. Ferrin	Nonsect	2	5
1524	Montpelier	Vermont Methodist Seminary.	Rev. E. A. Bishop, A. M.	M. E	5	7
1525	New Haven	Beeman Academy	H. D. Hoffnagle		1	1
1526	Peacham	Caledonia County Grammar School.	C. A. Bunker	Nonsect	1	2
1527	Poultney	Troy Conference Academy.	Chas. H. Dunton, D. D	M. E	5	3
1528	Royalton	Royalton Academy	Miss Celia Sherman, A. B.	Cong	1	4
1529	Rutland	English and Classical Institute.	G. W. and O. H. Perry	Nonsect	3	4
1530	St. Johnsbury	St. Johnsbury Academy	Chas. E. Putney	Nonsect	8	5
1531	Saxtons River	Vermont Academy	Geo. A. Williams, A. M., PH. D.	Bapt	4	7
1532	South Woodstock	Green Mountain Perkins Academy.	Miss Carrie A. Walker	Univ	0	2
1533	Thetford	Thetford Academy	J. N. Mallory	Nonsect	1	3
1534	Townshend	Leland and Gray Seminary.	David G. Smyth	Bapt	2	3
1535	Underhill	Underhill Academy	E. S. Whitcombe, jr., president of the board of trustees.	Nonsect	1	1
1536	Waterbury Center	Green Mountain Seminary and Minard Commercial School.	Miss E. Colley, A. M	Free Bapt	0	2
	VIRGINIA.					
1537	Abingdon	Abingdon Academy	Arthur P. Wilmer	Nonsect	2	0
1538	....do	Academy of the Visitation.	Sister M. Borgia Tubman, superioress.	R. C	0	10
1539	Alexandria	Claren's School for Girls	Misses Worthington	Epis	2	2
1540	....do	Episcopal High School of Virginia.	L. M. Blackford, M. A	P. E	7	0
1541	....do	Potomac Academy	John S. Blackburn		2	0
1542	....do	St. John's Academy	Richard L. Crane, A. M.	R. C	3	0
1543	Arvonia	Seven Islands School	Philip B. Ambler	Nonsect	2	0
1544	Ashland	School for Children	Miss Willie W. Nolley	0	2	0
1545	Bellevue	High School	Wm. R. Abbott	P. E	2	0
1546	Berryville	Shenandoah University School.	Wm. N. McDonald	0	2	0
1547	Bethel Academy	Bethel Classical and Military Academy.	Albert G. Smith	Nonsect	5	0
1548	Charlottesville	University School	Horace W. Jones	Nonsect	3	0
1549	Dayton	Shenandoah Institute	Geo. P. Hott, A. M	U. B	6	1
1550	Farmville	State Female Normal School.	John A. Cunningham		1	7
1551	Fincastle	Botetourt Female Institute.	E. A. Luster	Nonsect	1	2
1552	Floyd C. H	Jacksonville Normal School.	T. D. Sowers		1	1
1553	....do	Oxford Academy	Rev. and Mrs. John K. Harris.	Presb	0	1
1554	Fort Defiance	Augusta Military Academy.	Charles L. Roller	Nonsect	4	0
1555	Greenwood Depot	Greenwood School	Wm. Dinwiddie, jr	Nonsect	1	0
1556	Hale Ford	Classical and Normal School.	William E. Duncan	Nonsect	1	1
1557	Keswick	Broad Oak School	Miss Frances M. Mead	Epis	1	2
1558	....do	Edgehill Female School	Miss C. R. Randolph	Nonsect	0	4

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d other private secondary schools for 1889-90—Continued.

Students in conditional grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889-90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
14	0	6	0	4	0	8	No..	No..	400	No..	$40,150	0	.....	.....	0	1520
43	37	0	0	0	0	0	No..	No..	300	.....	4,000	.....	.....	$900	.....	1521
21	100	14	3	4	0	35	No..	No..	800	No..	20,000	$30,000	.....	.....	$1,500	1522
50	34	20	7	6	0	13	Yes.	No..	500	Yes.	15,200	30,000	.....	1,800	1,800	1523
36	177	51	21	0	0	24	Yes.	Yes.	1,500	No..	85,150	38,000	.....	7,737	1,280	1524
37	33	3	2	0	0	1	No..	No..	180	No..	5,075	10,800	.....	1,000	848	1525
48	57	9	10	0	0	3	No..	No..	1,500	No..	10,500	15,000	.....	600	900	1526
79	41	38	5	3	0	31	No..	Yes.	2,560	Yes.	60,550	3,000	.....	5,550	6,180	1527
10	18	1	2	0	0	0	No..	No..	65	No..	1,500	4,000	.....	.....	235	1528
40	37	10	2	5	1	3	No..	No..	1,000	No..	11,200	0	.....	2,110	0	1529
115	100	60	5	15	3	55	No..	Yes.	500	No..	251,000	100,000	.....	7,000	4,000	1530
94	82	30	24	37	43	23	Yes.	Yes.	800	No..	96,500	100,000	.....	5,854	5,000	1531
16	15	9	9	7	5	0	No..	No..	323	No..	1,900	10,000	.....	.....	450	1532
40	45	4	2	1	0	7	Yes.	No..	0	No..	5,050	5,000	$64	1,000	300	1533
6	16	0	1	0	0	16	No..	No..	300	Yes.	1,100	11,000	.....	400	500	1534
12	14	6	0	0	0	0	Yes.	No..	0	Yes.	1,100	0	.....	600	200	1535
25	35	....	....	0	0	20	Yes.	No..	800	Yes.	25,200	1,200	.....	1,200	660	1536
35	0	10	0	5	0	2	No..	No..	0	Yes.	12,500	0	.....	1,500	0	1537
0	30	....	....	0	0	0	No..	.....	500	.....	.....	.....	.....	.....	.....	1538
0	12	0	0	0	0	3	No..	Yes.	50	Yes.	7,000	0	.....	1,080	0	1539
102	0	0	0	0	0	0	No..	No..	0	No..	25,000	0	.....	8,000	0	1540
37	0	....	....	0	0	0	.....	.....	.....	No..	.....	.....	.....	.....	.....	1541
28	0	16	0	12	0	9	Yes.	Yes.	1,000	Yes.	9,500	0	.....	1,500	0	1542
11	0	8	0	0	0	3	.....	.....	1,000	Yes.	5,000	.....	.....	.....	.....	1543
4	12	....	....	0	0	0	No..	No..	0	Yes.	1,000	0	.....	.....	0	1544
48	0	42	0	2	0	8	No..	Yes.	3,500	Yes.	25,000	.....	.....	6,250	.....	1545
49	0	38	0	5	0	6	No..	No..	0	No..	10,000	.....	.....	2,500	.....	1546
63	0	55	0	3	0	0	No..	Yes.	2,000	Yes.	25,500	25,000	.....	3,600	3,000	1547
50	0	50	0	0	0	9	No..	No..	0	No..	.....	.....	.....	3,700	.....	1548
53	40	5	5	13	13	8	No..	No..	400	Yes.	6,300	.....	.....	.....	800	1549
0	170	....	....	0	0	15	Yes.	.....	500	Yes.	31,000	.....	10,000	500	1,900	1550
0	14	0	0	0	0	0	No..	No..	0	No..	600	0	0	.....	0	1551
31	23	18	10	15	12	6	Yes.	No .	0	Yes.	2,500	.....	225	.....	.....	1552
20	20	12	12	0	0	0	Yes.	No..	0	Yes.	2,000	0	.....	600	0	1553
71	0	38	0	0	0	20	No..	No..	500	Yes.	9,600	.....	0	2,500	2,500	1554
11	0	7	0	0	0	0	No..	No..	.....	No..	.....	.....	.....	.....	.....	1555
22	30	18	23	5	6	10	No..	Yes.	0	Yes.	800	0	0	1,500	0	1556
4	8	0	0	0	0	0	No..	No..	.....	Yes.	.....	.....	.....	400	.....	1557
0	23	0	0	....	....	.....	No..	No..	1,000	Yes.	10,000	.....	.....	.....	.....	1558

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TABLE 9.—*Statistics of endowed academies, seminaries,*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of secondary instructors.	
					Male.	Female.
	1	2	3	4	5	6
	VIRGINIA—cont'd.					
1559	Lodi	Liberty Hall Academy	J. W. Cole	Nonsect	1	1
1560	Longfield	Curry College	Z. T. John, president	Bapt	2	1
1561	Luray	Female Institute	M. M. Hargrove	Bapt	2	1
1562	Lynchburg	Female Academy	Mrs. L. S. Marye	Nonsect	0	3
1563	Marion	High School	Daniel C. Miller	Nonsect	3	0
1564	Markham	Cleveland High School	William C. Marshall	Nonsect	2	0
1565	Millwood	Brexton Home School	Miss Mary Page	Epis	0	2
1566	....do	Clay Hill Academy	Wm. H. Whiting, jr., A. M.	Nonsect	1	0
1567	New Market	Polytechnic Institute	W. H. Smith, A. M	0	1	2
1568	Norfolk	Norfolk Mission College	Rev. David R. McDonald.	U. B.	3	7
1569	Oliver	Glencaion Female School.	H. L. Campbell	Bapt	0	1
1570	Onancock	Onancock Academy	Frank P. Brent	0	2	2
1571	Pearisburg	Pearisburg Academy	George H. Gilmer	Nonsect	0	2
1572	Petersburg	St. Paul's Female School	Jos. G. Griswold, A. M.	Nonsect	2	2
1573	....do	University School	W. Gordon McCabe, A. M., head master.	0	5	0
1574	Portsmouth	Portsmouth Seminary	Mrs. Alice H. Jenkins.	Nonsect	0	4
1575	Richmond	Franklin Street School for Boys.	G. M. Nolley	0	2	0
1576	....do	Hartshorn Memorial College.	Rev. Lyman B. Tefft, A. M.	Bapt	1	2
1577	....do	McGuire's School	John P. McGuire	Nonsect	4	2
1578	....do	Merrill Female School	George F. Merrill	Nonsect	1	3
1579	....do	University School of Richmond,	Thomas D. Norwood		3	0
1580	Rockfish Depot	Kleinberg Female Seminary.	Misses Walles		1	3
1581	Snowflake	Greenwood High School	Harry L. Rollins		2	0
1582	South Boston	Female Institute	J. P. Snead	Nonsect	1	2
1583	Staunton	Augusta Female Seminary.	Miss M. J. Baldwin	Presb	2	5
1584	....do	Military Academy	Wm. H. Kable	0	6	0
1585	Suffolk	Collegiate Institute	P. J. Kernodle, A. M	Christian	3	2
1586	....do	Female Institute	Sally A. Finney	Meth	1	6
1587	....do	Military Academy	Joseph King, A. M	Nonsect	3	0
1588	....do	Nansemond Seminary	Mrs. Lucy H. Quimby	Epis	0	3
1589	Tazewell C. H	Tazewell Female Seminary.	Mrs. R. B. Gillespie	Nonsect	2	3
1590	The Plains	Furcron's School for Boys.	A. S. Furcron, A. M		1	0
1591	Warrenton	Fauquier Female Institute.	Geo. G. Butler, A. M	Nonsect	1	3
1592	Waynesboro	Valley Seminary	Mrs. Jos. B. Winston	Presb	3	5
1593	Wood	Riverview Seminary	Wm. F. Ramey, A. M		1	1
1594	Wood Lawn	Normal Institute	G. M. Ivie		2	2
1595	Wytheville	Trinity Hall Female College.	Rev. Alex. Phillippi	Luth	1	4
1596	....do	Wytheville Seminary	Mrs. Thos. Dew	Epis	0	3
	WASHINGTON.					
1597	Coupeville	Puget Sound Academy	Rev. Charles E. Newberry.	Cong	1	1
1598	Ellensburg	Ellensburg Academy	Rev. J. Shepard Bingham, A. M.	Presb	1	2
1599	Farmington	House of Providence	Sister M. Amedee	R. C	1	0
1600	Montesamo	Chehalis Valley Academy.	Robert Cruikshank	Presb	1	1
1601	North Yakima	St. Joseph's Academy	Sister Mary Amelia	R. C	0	4
1602	Olympia	Collegiate Institute	Rev. Luther Covington, A. M., S. J. B.	Meth	3	3

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l other private secondary schools for 1889–90—Continued.

tu-ents in cond-ary rade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
	Female.	Male.	Female.	Male.	Female.											
r	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	6	----	----	0	0	0	No..	------	-------	Yes.	$2,500	--------	$240	$364	-------	1559
6	12	5	3	17	12	0	Yes.	No .	0	Yes.	2,000	• 0	250	400	0	1560
0	30	0	0	0	0	0	No..	No..	0	Yes.	10,000	0	0	0	0	1561
0	18	----	----	0	0	5	No..	No..	-------	Yes.	-------	0	0	1,000	0	1562
0	0	20	0	12	0	4	No..	No..	0	Yes.	4,050	0	-------	1,800	0	1563
6	0	----	----	0	0	0	------	No..	300	Yes.	6,035	--------	0	1,200	-------	1564
0	10	----	----	0	0	0	No..	------	-------	Yes.	-------	-------	-------	-------	-------	1565
2	0	7	0	0	0	1	No..	Yes.	500	Yes.	12,000	--------	-------	-------	-------	1566
0	6	10	5	0	0	0	No..	No..	500	Yes.	2,500	0	-------	-------	0	1567
8	92	68	92	0	0	7	No..	No..	500	Yes.	30,300	--------	-------	700	$7,000	1568
0	6	0	5	0	0	3	No..	No..	300	Yes.	-------	--------	-------	-------	-------	1569
31	26	----	----	0	0	7	No..	No..	750	Yes.	8,000	0	-------	3,750	0	1570
10	17	----	----	0	0	0	No..	No..	0	Yes.	-------	0	-------	1,000	0	1571
0	40	0	0	0	0	1	No..	No..	100	Yes.	5,050	0	-------	2,500	0	1572
04	0	----	----	0	0	0	No..	No..	5,000	Yes.	11,000	--------	-------	-------	-------	1573
0	30	0	30	0	0	4	No..	No..	200	Yes.	-------	0	0	700	-------	1574
25	0	10	0	5	0	3	No..	Yes.	0	Yes.	7,000	--------	-------	2,500	-------	1575
0	10	0	0	0	0	7	No..	No..	300	Yes.	35,500	0	-------	487	785	1576
96	0	50	0	16	0	8	No..	No..	37	Yes.	5,100	0	0	6,500	0	1577
0	30	0	5	0	4	1	No..	No..	0	Yes.	10,000	--------	-------	3,009	-------	1578
47	0	42	0	5	0	6	No..	No..	0	Yes.	7,000	0	-------	1,876	0	1579
0	26	0	4	0	0	8	No..	No..	200	------	5,000	--------	-------	3,000	-------	1580
18	23	5	7	0	0	9	No..	Yes.	73	Yes.	600	--------	165	500	-------	1581
10	15	0	0	0	0	0	No..	No..	0	Yes.	6,000	--------	-------	-------	-------	1582
0	70	----	----	0	0	0	------	------	-------	------	-------	-------	-------	-------	-------	1583
117	0	0	0	0	0	0	No..	Yes.	500	No..	26,000	0	-------	25,000	0	1584
24	18	16	8	8	10	5	No..	No..	800	Yes.	10,000	--------	-------	2,100	-------	1585
2	75	----	----	0	0	4	No..	No..	300	Yes.	15,000	--------	-------	3,525	-------	1586
50	0	40	0	0	0	0	No..	No..	300	Yes.	6,500	0	0	3,000	0	1587
0	20	1	0	0	0	1	No..	No..	150	Yes	4,050	0	0	-------	0	1588
0	35	0	25	0	0	0	No..	No..	600	Yes.	8,000	--------	0	2,500	-------	1589
13	0	13	0	0	0	0	No..	No..	-------	Yes.	600	0	0	600	0	1590
0	65	----	----	0	0	3	No..	No..	350	Yes.	10,000	0	0	2,000	0	1591
0	85	----	----	0	0	1	No..	No..	100	Yes.	10,000	0	0	3,500	0	1592
24	20	5	0	12	4	0	No..	Yes.	200	------	3,200	--------	165	600	0	1593
50	40	15	10	20	25	0	Yes.	No..	0	------	2,000	--------	-------	400	-------	1594
0	44	----	----	0	0	0	------	------	-------	No..	-------	--------	-------	-------	-------	1595
0	18	0	18	0	0	0	No..	No..	-------	Yes.	15,000	--------	-------	3,000	-------	1596
9	12	6	3	2	0	1	No..	No..	800	No..	10,100	$7,000	-------	1,417	500	1597
20	26	1	0	0	0	0	No..	No..	300	Yes.	12,000	0	0	1,200	0	1598
1	6	0	0	0	0	0	No..	No..	30	Yes.	12,000	0	-------	2,916	0	1599
10	19	0	0	0	0	0	No..	No..	40	No..	12,000	0	-------	-------	0	1600
0	20	0	0	0	0	0	Yes.	No..	-------	Yes.	-------	--------	-------	-------	-------	1601
13	27	2	4	3	5	20	Yes.	No..	40	Yes.	25,025	0	-------	-------	0	1602

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TABLE 9.—*Statistics of endowed academies, seminaries*

	State and post-office.	Name of institution.	Name of principal.	Religious denomination.	Number of students in preparatory department.	
					Male.	Female.
	1	2	3	4	5	6
	WASHINGTON—ctd.					
1602	Seattle	Academy of the Holy Names.	Sister Mary Geraldine	R. C	0	3
1604	Tacoma	Annie Wright Seminary	Mrs. Sarah K. White	P. E	1	7
1605	....do	Washington College	D. S. Pulford, A. M	P. E	3	1
1606	Vancouver	St. James College	P. Hough	R. C	5	0
1607	Waitsburg	Waitsburg Academy	Rev. W. G. M. Hays	U. P	2	1
	WEST VIRGINIA.					
1608	Charlestown	Male Academy	Edmund R. Taylor	0	2	3
1609	Parkersburg	Academy of the Visitation.	Sister Mary Cecilia Mulrine.	R. C	0	4
1610	St. Albans	Shelton College	W. G. Miller	Bapt	2	2
1611	Salem	Salem College	S. L. Maxon, A. M., B. D.	7th-Day Adventist	3	1
	WISCONSIN.					
1612	Albion	Academy and Normal Institute.	D. E. Willard	7th-Day Baptist.	4	2
1613	Beaver Dam	Wayland University	W. S. Sweet, acting principal.	Bapt	3	6
1614	Evansville	Evansville Seminary	J. E. Coleman	Free Meth.	2	4
1615	Kenosha	Kemper Hall	Miss M. H. Yerkes	Epis	1	6
1616	Madison	Wisconsin Academy	Wm. M. Pond and Miss Charlotte Richmond.	0	1	12
1616	Marinette	Academy of Lourdes	Sister Clodulpha	R. C	0	2
1618	Milwaukee	Cathedral Institute	Dr. Samuel W. Murphy, A. M.	P. E	2	3
1619	....do	Concordia College	Ch. H. Loeber	Luth	6	0
1620	....do	German English Academy.	Emil Dapprich	0	1	3
1621	....do	Milwaukee Academy	Isaac Thomas, A. M	Nonsect	4	0
1622	Mount Calvary	St. Lawrence College	Very Rev. Lawrence Vorwerk, O. M. C.		5	0
1623	Prairie du Chien	St. Mary's Institute	Sister M. Seraphia	R. C	0	6
1624	Racine	Home School	Mrs. J. G. McMurphy	0	2	4
1625	....do	Racine College	Arthur Piper, S. V. D	P. E	6	3
1626	....do	St. Catharine's Academy and Normal School.	Mother M. Hyacintha	R. C	0	0
1627	Rochester	Rochester Seminary	A. D. McIntyre	Free Will Bapt.	1	1
1628	St. Francis	Catholic Normal School and Pio Nono College.	Rev. W. W. Gerend	R. C	0	0
1629	Sinsinawa	St. Clara's Academy	Dominican Sisters		0	10
1630	Watertown	University of Our Lady of the Sacred Heart.	Rev. Jno. O'Keeffe, O. S. C.	R. C	6	0
1631	Waukesha	Carroll College	W. L. Rankin, PH. D	Presb	2	2
	WYOMING.					
1632	Cheyenne	Academy of the Holy Child Jesus.	Mother Mary Stanislaus.	R. C	0	8

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and other private secondary schools for 1889–90—Continued.

Students in secondary grade.		Number preparing for college classical course.		Number preparing for scientific course.		Total number of graduates for 1889–90.	Is drawing obligatory?	Has the school a gymnasium?	Number of volumes in library.	Has the school an elementary department?	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Amount of State aid.	Income from tuition fees.	Income from productive funds, gifts, and bequests.	
Male.	Female.	Male.	Female.	Male.	Female.											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
0	45	0	11	0	34	5	Yes.	No..	2,000	Yes.	.....	.....	.....	.....	.....	1603
0	162	0	0	0	0	13	No..	Yes.	1,000	Yes.	$151,000	$50,000	.....	$25,000	$3,400	1604
57	0	0	0	0	0	7	No..	Yes.	400	Yes.	100 200	50,000	0	3,521	3,300	1605
30	0	10	0	0	0	2	No..	Yes.	700	Yes.	10,800	0	0	1,200	0	1606
11	17	0	0	0	0	4	No..	No..	250	Yes.	6,100	3,000	0	1,479	850	1607
39	0	22	0	0	0	0	No..	No..	0	No..	1,500	0	0	0	0	1608
0	27	0	0	0	0	8	No..	No..	.....	Yes.	500	.....	.....	.....	.....	1609
25	10	0	0	0	0	0	No..	No..	300	Yes.	20,500	0	.....	675	0	1610
16	11	0	0	0	0	0	No..	No..	50	No..	7,000	0	.....	1,200	0	1611
75	50	....	....	0	0	5	No..	No..	275	No..	4,050	6,000	0	1,300	6,000	1612
81	72	10	8	13	10	9	No..	No..	500	No..	50,100	35,000	0	4,000	2,500	1613
80	65	0	0	15	10	7	No..	Yes.	200	Yes.	25,110	0	0	1,800	500	1614
0	56	0	5	0	0	0	.....	Yes.	1,800	No..	100,700	.....	.....	20,000	.....	1615
30	30	....	....	0	0	16	Yes.	No..	50	Yes.	.....	.....	.....	4,000	.....	1616
16	24	0	0	12	16	6	No..	No..	260	Yes.	18,100	0	0	2,000	20	1617
60	15	15	5	25	10	1	No..	No..	300	Yes.	.....	.....	.....	.....	.....	1618
138	0	0	0	0	0	18	Yes.	Yes.	1,500	No..	91,200	0	0	150	8,350	1619
23	21	....	....	0	0	9	Yes.	Yes.	1,000	Yes.	37,200	.....	.....	4,800	60,000	1620
47	0	5	0	2	0	7	No..	Yes.	300	Yes.	20,500	0	0	6,600	30	1621
40	0	20	0	20	0	14	Yes.	No..	2,000	No..	40,300	0	0	3,000	0	1622
0	48	....	....	0	0	0	Yes.	.....	.....	.....	.....	.....	.....	.....	.....	1623
0	38	0	2	0	0	6	Yes.	No..	4,000	Yes.	10,000	.....	.....	4,700	.....	1624
53	0	10	0	15	0	2	No..	Yes.	.....	Yes.	1,000	0	.....	21,250	0	1625
0	30	0	0	0	0	2	Yes.	Yes.	2,350	.....	.....	.....	.....	.....	.....	1626
12	3	0	1	5	0	1	No..	No..	50	No..	3,000	0	.....	491	2,500	1627
65	0	....	....	0	0	3	Yes.	Yes.	1,000	.....	.....	.....	.....	.....	.....	1628
0	80	....	....	0	0	4	.....	.....	2,000	.....	1,000	.....	.....	.....	.....	1629
30	0	25	0	0	0	3	No..	No..	2,000	Yes.	.....	.....	.....	.....	.....	1630
23	36	....	....	0	0	8	No..	Yes.	500	No..	41,000	18,000	.....	2,113	1,633	1631
0	60	0	0	0	0	2	Yes.	No..	300	Yes.	.....	.....	.....	.....	.....	1632

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TABLE 1—*Statistics of colleges for*

	Location.	Name.	President.
	1	2	3
	CALIFORNIA.		
1	Mills College	Mills College and Seminary	Mrs. C. T. Mills
	MARYLAND.		
2	Baltimore	Woman's College of Baltimore	William H. Hopkins, A. M., PH. D.[a]
	MASSACHUSETTS.		
3	Cambridge	Society for the Collegiate Instruction of Women.	Arthur Gilman, secretary
4	Northampton	Smith College	L. Clark Seelye, D. D.
5	South Hadley	Mount Holyoke Seminary and College.	Louise F. Cowles, acting president.[b]
6	Wellesley	Wellesley College	Helen A. Shafer, A. M.
	NEW JERSEY.		
7	Princeton	Evelyn College	J. H. McIlvaine, D. D
	NEW YORK.		
8	Aurora	Wells College	Edward S Frisbee, D. D
9	Elmira	Elmira College	Charles Van Norden, D. D.
10	Le Roy	Ingham University	W. W. Totheroh, D. D
11	New York (343 Madison ave.)	Barnard College	Rev. Arthur Brooks, chairman of board of trustees.
12	Poughkeepsie	Vassar College	James M. Taylor, D. D
	OHIO.		
13	Cleveland	Cleveland College for Women	Hiram C. Haydn, D. D., LL. D.[c]
	PENNSYLVANIA.		
14	Bryn Mawr	Bryn Mawr College	James E. Rhoads, M. D., LL. D

*Statistics of 1883-'80.
[a] Succeeded by John F. Goucher, D. D.

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omen for 1889-90.—DIVISION A.

Professors and instructors.			Students.												
Male.	Female.	Total.	Preparatory department.	Academic department.	Collegiate department.	Resident graduates.	Total number.	Number of State scholarships.	Number of other scholarships.	Number of volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Amount of productive funds.	Benefactions.	
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
6	20	26	56	164	10	.....	230	0	11	45,000	$1,000	$350,000	$80,000	.....	1
12	12	24	120	.....	30	.....	283	0	6	.....	10,000	340,000	150,000	$61,000	2
57	0	57	0	0	138	4	142	0	2	3,000	1,000	30,000	75,000	.....	3
14	18	32	0	0	540	1	541	0	100	5,635	74,400	428,000	422,739	10,542	4
5	39	44	0	231	42	1	272	0	.....	13,167	23,000	284,000	150,000	19,000	5
7	72	79	0	0	650	10	660	0	29	35,562	72,000	1,082,425	175,000	36,000	6
9	4	13	18	23	4	1	46	.....	.....	2,000	.....	.....	.....	.....	7
4	9	13	22	.....	35	0	57	0	0	3,000	3,000	150,000	200,000	0	8
7	9	16	87	.....	59	.....	146	0	3	2,800	6,000	150,000	93,400	700	9
.....	16	16	27	59	20	.....	106	.....	.....	25,000	1,500	88,000	.....	6,000	10
8	1	9	0	0	36	0	36	0	0	.....	1,900	0	0	9,795	11
8	27	35	0	0	261	5	323	0	.....	20,000	*96,591	*532,628	574,322	.....	12
15	3	18	.....	.....	11	.....	38	.....	.....	.....	.....	.....	50,000	50,000	13
16	7	23	0	0	100	21	121	0	12	7,500	15,000	448,147	.....	465	14

b Elizabeth Storrs Mead has been elected president.
c Succeeded by Chas. F. Thwing, D. D.

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TABLE 1.—*Statistics of colleges for*

	Location.	Name.	President.
	1	2	3
	ALABAMA.		
1	Athens	Athens Female College	M. G. Williams, D. D
2	Huntsville	Huntsville Female College	A. B. Jones, D. D., LL. D
3	do	Huntsville Female Seminary	J. D. Anderson, A. M
4	Marion	Judson Female Institute	S. W. Averett
5	do	Marion Female Seminary	James D. Wade, A. M
6	Tuscaloosa	Central Female College	Sumner B. Foster, A. M. *a*
7	do	Tuscaloosa Female College	Alonzo Hill, A. M
8	Tuskegee	Alabama Conference Female College.	John Massey, LL. D
	CALIFORNIA.		
9	San José	College of Notre Dame	Sister Amélie de St. Joseph
10	Santa Rosa	Santa Rosa Ladies' College	William A. Finley, A. M., D. D. *b*
	GEORGIA.		
11	Athens	Lucy Cobb Institute	Miss M. Rutherford
12	Covington	Georgia Methodist Female College.*	Rev. John T. McLaughlin, A. M
13	Cuthbert	Andrew Female College*	H. W. Key *c*
14	Dalton	Dalton Female College	Rev. A. B. Warwick *d*
15	Forsyth	Monroe Female College	Richard T. Asbury, A. M. *e*
16	La Grange	La Grange Female College	Rufus W. Smith, A. M
17	do	Southern Female College	Mrs. I. F. Cox
18	Macon	Wesleyan Female College	William C. Bass, D. D
19	Marietta	Harwood Seminary	Joseph S. Stewart, jr
20	Rome	Shorter College	L. R. Gwaltney, D. D., and A. J. Battle, D. D.
21	Thomasville	Young Female College	John E. Baker, A. M
	ILLINOIS.		
22	Chicago	Seminary of the Sacred Heart*	Madame Henrietta Spalding
23	Jacksonville	Illinois Female College	William F. Short, A. M., D. D
24	do	Jacksonville Female Academy	E. F. Bullard, A. M
25	Knoxville	St Mary's School	Chas. W. Leffingwell, D. D., rector
26	Morgan Park	Chicago Female College	Gilbert Thayer, D. D
27	Rockford	Rockford Seminary	Sarah F. Anderson
	KANSAS.		
28	Oswego	College for Young Ladies	Miss S. H. Johnson
29	Topeka	College of the Sisters of Bethany	Elisha Smith Thomas, S. T. D
	KENTUCKY.		
30	Bowling Green	Potter College for Young Ladies.	Rev. B. F. Cabell, M. A. L. PH
31	Clinton	Clinton College	Amanda M. Hicks
32	Danville	Caldwell College	Charlotte A. Campbell
33	Georgetown	Georgetown Female Seminary	J. J. Rucker, LL. D
34	Glasgow	Liberty Female College	Rev. T. S. P. McCall, A. M
35	Glendale	Lynnland Female College	E. W. Elrod and E. W. White
36	Harrodsburg	Daughters College	John Augustus Williams
37	Lexington	Hamilton Female College	J. T. Patterson *f*
38	do	Sayre Female Institute	H. B. McClellan, A. M
39	Millersburg	Millersburg Female College	Rev. Cadesman Pope
40	Nicholasville	Jessamine Female Institute*	Miss M. F. Hewitt
41	Pewee Valley	Kentucky College for Young Ladies.	Erastus Rowley, D. D
42	Russellville	Logan Female College	A. G. Murphy, A. M
43	Shelbyville	Stuart Female College*	W. H. Stuart *g*
44	Stanford	Stanford Female College	J. M. Hubbard, A. M
45	Winchester	Winchester Female College	S. W. Pearcy
46	Woodburn	Cedar Bluff Female College	Horace H. Epes, A. M

* Statistics of 1888-89.

a Succeeded by Horace H. Epes, A. M.

b Succeeded by Martha E. Chase.

c Succeeded by Rev. P. S. Twitty.

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omen for 1889–90.—DIVISION B.

Professors and instructors.			Students.							Number of volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Amount of productive funds.	Benefactions.	
Male.	Female.	Total.	Preparatory department.	Academic department.	Collegiate department.	Resident graduates.	Total number.	Number of State scholarships.	Number of other scholarships.						
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	11	12	40	12	110	0	162	.....	.....	500	$250	$30,000	0	$500	1
3	17	20	33	15	176	9	248	0	3	2,896	7,500	75,000	0	0	2
1	4	5	20	.....	20	.....	40	0	0	400	.....	15,000	.....	.....	3
2	10	12	25	.....	119	6	150	0	1	3,000	100	70,900	.....	10,000	4
0	8	8	15	40	40	.....	95	.....	2	1,000	.....	30,000	.....	.....	5
2	8	10	33	44	79	2	158	0	5	.....	.....	215,000	0	0	6
2	15	17	22	43	138	5	218	0	0	3,500	500	30,000	0	0	7
2	11	13	27	25	175	.....	227	.....	.....	.....	.....	.....	.....	.....	8
1	25	26	42	31	14	0	87	0	0	2,000	6,000	215,220	0	0	9
2	5	7	15	10	5	.....	30	.....	.....	1,500	.....	18,000	.....	.....	10
0	10	10	10	22	108	.....	140	.....	.....	2,000	.....	40,000	.....	.....	11
3	4	7	40	.....	100	.....	140	0	0	.....	.....	.....	.....	.....	12
3	5	8	41	.....	106	6	162	.....	1	.....	.....	.....	.....	.....	13
1	4	5	60	20	50	.....	130	.....	.....	200	500	15,000	.....	.....	14
0	6	6	20	30	53	.....	103	0	0	.....	.....	15,000	0	.....	15
5	10	15	62	.....	93	.....	177	0	.....	1,000	300	50,000	.....	700	16
3	10	13	60	.....	126	10	217	0	0	4,000	3,500	55,000	0	0	17
6	8	14	.....	.....	260	.....	260	.....	7	3,000	1,500	250,000	$40,000	.....	18
3	5	8	45	30	86	.....	161	0	0	250	200	12,000	200	50	19
5	10	15	61	38	118	.....	217	.....	10	2,000	2,500	130,000	35,000	0	20
1	4	5	38	.....	84	1	123	0	0	.....	350	2,500	3,000	0	21
2	18	20	15	.....	78	3	100	0	0	1,600	1,200	.....	.....	.....	22
4	8	12	50	.....	100	.....	150	.....	.....	1,000	500	75,000	.....	.....	23
1	7	8	14	.....	107	.....	122	.....	.....	.....	.....	.....	.....	.....	24
3	9	12	.....	.....	.....	0	124	0	0	1,200	5,000	120,000	0	3,000	25
5	6	11	.....	.....	.....	.....	55	.....	.....	400	100	30,000	.....	.....	26
1	22	23	99	.....	43	.....	142	0	3	5,000	.....	100,000	17,000	0	27
0	8	8	27	.....	33	.....	60	.....	.....	300	30	32,000	.....	.....	28
2	12	14	89	.....	55	.....	144	0	2	1,452	1,000	350,000	0	0	29
3	9	12	6	20	114	7	149	.....	.....	3,000	1,500	50,000	.....	.....	30
0	8	8	200	.....	25	.....	225	0	0	1,000	50	30,000	0	9,700	31
0	13	13	38	.....	115	.....	153	0	2	250	.....	40,000	0	0	32
4	9	13	25	.....	92	.....	127	.....	.....	400	.....	25,000	.....	.....	33
1	7	8	31	21	50	.....	102	0	0	700	100	25,000	0	500	34
2	3	5	8	18	41	.....	67	0	0	500	50	20,000	0	0	35
3	6	9	.....	.....	100	.....	100	0	1	3,000	1,000	30,000	.....	.....	36
7	9	16	20	.....	132	.....	152	.....	.....	400	.....	60,000	.....	.....	37
3	11	14	65	49	110	.....	220	.....	6	.....	4,000	100,000	0	.....	38
5	10	15	47	60	105	.....	212	.....	2	1,000	300	15,000	.....	.....	39
1	9	10	54	.....	70	.....	124	.....	1	300	.....	26,000	.....	.....	40
1	7	8	15	28	41	2	86	.....	.....	500	.....	30,000	.....	0	41
1	8	9	27	47	67	.....	141	.....	.....	1,500	300	35,000	.....	700	42
1	4	5	24	.....	60	.....	84	.....	.....	300	50	10,000	.....	.....	43
1	4	5	17	30	32	.....	79	.....	2	400	.....	10,000	.....	.....	44
1	5	6	60	10	10	.....	80	.....	.....	500	.....	15,000	.....	.....	45
1	8	9	.....	.....	.....	.....	51	.....	.....	250	20	10,000	.....	.....	46

d Succeeded by Rev. Gustavus J. Orr.
e Succeeded by J. E. Powell.
f Succeeded by J. B. Skinner.
g Succeeded by Miss L. V. Sullivan.

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TABLE 1.—*Statistics of colleges for women*

	Location.	Name.	President.
	1	2	3
	LOUISIANA.		
47	Clinton	Silliman Female Collegiate Institute.	George J. Ramsey, A. M
48	Mansfield	Mansfield Female College	Rev. A. D. McVoy, A. M
49	Minden	Minden Female College*	Arthur L. Cox, A. M., M. S
	MAINE.		
50	Deering	Westbrook Seminary and Female College.	Albert B. Allen, A. M
51	Kent Hill	Maine Wesleyan Seminary and Female College.	Edgar M. Smith, D. D
	MARYLAND.		
52	Frederick	Frederick Female Seminary	William H. Purnell, A. M., LL. D.
53	Lutherville	Lutherville Female Seminary	Rev. J. H. Turner, A. M
	MASSACHUSETTS.		
54	Auburndale	Lasell Seminary	Charles C. Bragdon, A. M
55	Boston	Gannett Institute	George Gannett, D. D
56	Norton	Wheaton Female Seminary	Miss A. E. Stanton
	MINNESOTA.		
57	Albert Lea	Albert Lea College	Miss Ella Young *a*
58	Minneapolis	Bennet Seminary	Miss S. E. Sedgwick and Mrs. Sedgwick-Smith.
	MISSISSIPPI.		
59	Blue Mountain	Blue Mountain Female College	Rev. W. T. Lowrey, A. M
60	Brookhaven	Whitworth Female College	Lewis T. Fitzhugh, A. M
61	Clinton	Hillman College	Rev. Walter Hillman, LL. D
62	Columbus	Industrial Institute and College	Arthur H. Beals, A. M., PH. D
63	Corinth	Corinth Female College	Miss N. Lena Elgin
64	Meridian	East Mississippi Female College	C. W. Anderson
65	Oxford	Union Female College	H. N. Robertson, A. M
66	Pontotoc	Chickasaw Female College	Mrs. M. J. Buchanan
67	Port Gibson	Port Gibson Female College	Miss M. E. Compton
68	Shuqualak	Shuqualak Female College	Rev. L. M. Stone
69	Starkville	Starkville Female Institute	T. G. Sellers, D. D
70	Summit	Lea Female College	Charles H. Otken, LL. D
	MISSOURI.		
71	Columbia	Christian Female College	W. A. Oldham, A. M
72	....do	Stephens' Female College	Rev. T. W. Barrett, A. M
73	Fayette	Howard Payne College	Rev. Hiram D. Groves
74	Fulton	Synodical Female College	Rev. H. C. Evans, A. M
75	Independence	Kansas City Ladies' College	J. M. Chaney, D. D
76	Jennings	St. Louis Seminary	B. T. Blewett, LL. D
77	Lexington	Baptist Female College	R. E. Bimford *b*
78	....do	Central Female College	Archibald A. Jones
79	....do	Elizabeth Aull Female Seminary	J. D. Blanton
80	Mexico	Hardin College	A. K. Yancey
81	St. Charles	Lindenwood Female College	Robert Irwin, D. D
82	St. Louis	Ursuline Academy*	Mother Seraphine
	NEW HAMPSHIRE.		
83	Tilton	New Hampshire Conference Seminary and Female College.	Daniel C. Knowles, D. D. *c*
84	West Lebanon	Tilden Seminary	E. Hubbard Barlow, A. M., PH. D.
	NEW JERSEY.		
85	Bordentown	Bordentown Female College	Rev. William C. Bowen, A. M. *d*

*Statistics of 1888-89. *a* Succeeded by R. B. Abbott, D. D. *b* Succeeded by W. A. Wilson, A. M.

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r 1889–90.—DIVISION B—Continued.

Professors and instructors.			Students.												
Male.	Female.	Total.	Preparatory department.	Academic department.	Collegiate department.	Resident graduates.	Total number.	Number of State scholarships.	Number of other scholarships.	Number of volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Amount of productive funds.	Benefactions.	
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
2	7	9	60	.....	62	.....	122	0	30	1,000	$400	$30,000	$30,000	.....	47
2	7	9	20	25	55	.....	100	.....	.....	1,200	75	30,000	0	0	48
1	3	4	0	.....	51	.....	51	2	0	500	.....	10,000	0	0	49
4	6	10	.....	60	40	.....	100	.....	2	3,500	2,000	100,000	30,000	65,000	50
10	7	17	55	281	8	.....	344	5	0	6,000	5,000	107,000	120,000	0	51
1	9	10	16	.....	92	.....	108	22	5	2,000	1,200	100,000	32,000	0	52
4	6	10	9	.....	80	1	90	0	0	1,200	200	40,000	0	.....	53
8	18	26	.....	166	.....	.....	166	0	3	1,500	2,000	120,000	.....	0	54
7	8	15	.....	50	.....	.....	50	.....	.....	6,000	500	60,000	.....	.....	55
.....	.....	17	.....	.....	.....	.....	90	0	8	.....	.....	.....	.....	.....	56
1	7	8	.....	32	16	0	48	0	0	982	800	40,000	0	2,258	57
2	8	10	16	.....	.....	.....	16	0	0	400	.....	30,000	0	.....	58
4	14	18	0	30	170	0	200	0	0	1,200	250	25,000	0	0	59
3	12	15	36	90	100	.....	226	0	0	500	250	50,000	.....	0	60
2	7	9	25	50	55	1	131	.....	.....	2,000	1,500	25,000	0	.....	61
1	19	20	.....	.....	.....	.....	312	301	.....	200	300	50,000	.....	.....	62
0	6	6	54	38	34	.....	126	.....	.....	.....	.....	4,000	.....	.....	63
1	9	10	.....	.....	.....	.....	147	0	0	300	.....	25,000	0	6,000	64
1	5	6	.....	.....	.....	.....	55	0	0	200	150	10,000	0	.....	65
1	5	6	30	.....	24	.....	54	.....	.....	2,000	300	35,000	.....	.....	66
.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	.....	67
1	4	5	32	.....	74	.....	106	.....	.....	250	150	8,500	.....	.....	68
1	8	9	40	57	100	.....	197	.....	.....	1,200	500	10,000	.....	.....	69
1	4	5	10	15	48	1	78	0	0	300	.....	10,000	.....	700	70
3	7	10	.....	.....	.....	.....	166	.....	.....	1,000	40	50,000	.....	.....	71
.....	10	10	28	.....	116	.....	144	.....	.....	.....	200	.....	20,000	.....	72
3	8	11	32	90	54	1	204	0	0	300	100	25,000	0	.....	73
2	9	11	31	.....	114	.....	145	0	0	500	500	35,000	0	0	74
2	6	8	24	.....	65	.....	89	0	0	.....	1,000	30,000	.....	.....	75
.....	.....	7	10	10	10	0	30	0	0	2,500	0	60,000	0	0	76
3	13	16	15	.....	99	.....	114	.....	.....	500	0	30,000	0	0	77
4	13	17	20	75	80	2	177	0	0	2,000	300	75,000	.....	19,000	78
4	8	12	20	.....	80	.....	100	.....	.....	500	500	25,000	.....	.....	79
3	4	7	.....	.....	.....	.....	186	.....	.....	1,000	2,500	65,000	45,000	.....	80
1	11	12	.....	11	89	.....	100	0	0	3,000	500	75,000	11,000	0	81
0	10	10	26	.....	74	.....	100	.....	.....	700	.....	60,000	.....	.....	82
4	5	9	.....	.....	.....	.....	224	.....	.....	.....	.....	75,000	49,000	2,000	83
1	6	7	15	20	.....	.....	35	0	3	1,400	1,000	60,000	2,000	.....	84
3	5	8	.....	.....	.....	.....	47	.....	.....	.....	.....	.....	.....	.....	85

c Succeeded by Rev. J. M. Durrell. *d* Succeeded by Mrs. Gertrude G. Bowen.

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TABLE 1.—*Statistics of colleges for women.*

	Location.	Name.	President.
	1	2	3
	NEW YORK.		
86	Brooklyn	Packer Collegiate Institute	Truman J. Backus, LL. D
87	Canandaigua	Granger Place School	Caroline A. Comstock
	NORTH CAROLINA.		
88	Asheville	Asheville Female College	B. E. Atkins, A. M
89	Charlotte	Charlotte Female Institute	Rev. W. R. Atkinson
90	Dallas	Gaston College	Rev. M. L. Little *a*
91	Greensboro	Greensboro Female College*	T. M. Jones, A. M., D. D. *b*
92	Hickory	Claremont Female College*	Will H. Sanborn
93	Lenoir	Davenport Female College	John D. Minick, A. B
94	Louisburg	Louisburg Female College	S. D. Bagley, A. M
95	Murfreesboro	Chowan Baptist Female Institute	John B. Brewer, A. M
96	....do	Wesleyan Female College	E. E. Parham
97	Oxford	Oxford Female Seminary	Nathan Penick
98	Raleigh	Estey Seminary	H. M. Tupper, D. D
99	....do	Peace Institute	James Dinwiddie, A. M
100	Salem	Salem Female Academy and College.	Rev. John H. Clewell
101	Thomasville	Thomasville Female College	H. W. Reinhart *c*
102	Wilson	Wilson Collegiate Institute	Silas E. Warren
	OHIO.		
103	Cincinnati (Lawrence and Third streets)	Bartholomew English and Classical School.	George K. Bartholomew, A. M., PH. D.
104	Cincinnati (Wesley avenue)	Cincinnati Wesleyan College	W. K. Brown, A. M., D. D
105	Glendale	Glendale Female College	L. D. Potter, D. D
106	Granville	Granville Female College	Rev. D. B. Hervey, PH. D
107	....do	Shepardson College	D. B. Purinton, LL. D
108	Oxford	Oxford Female College	Faye Walker, D. D
109	Painesville	Lake Erie Female Seminary	Miss Mary Evans
	PENNSYLVANIA.		
110	Allentown	Allentown Female College	Rev. William M. Reily, PH. D
111	Bethlehem	Moravian Seminary	Rev. J. Blickensderfer
112	Chambersburg	Wilson College	Rev. John Edgar, PH. D
113	Lititz	Linden Hall Seminary	H. A. Brickenstein
114	Mechanicsburg	Irving Female College	Mary L. Kessler *d*
115	Ogontz School	Ogontz School for Young Ladies	Frances E. Bennett and Sylvia J. Eastman.
116	Philadelphia	Philadelphia Seminary	Rebecca E. Judkins
117	Pittsburg	Pittsburg Female College	A. H. Norcross, D. D
118	Washington	Washington Female Seminary	Miss Nancy Sherrard
	SOUTH CAROLINA.		
119	Anderson	Anderson Female College	Rev. A. A. Marshall
120	Columbia	Columbia Female College	Samuel B. Jones, D. D
121	Due West	Due West Female College	Mrs. L. M. Bonner
122	Gaffney City	Cooper-Limestone Institute	H. P. Griffith
123	Greenville	Greenville Female College	Alexander S. Townes
124	Walhalla	Walhalla Female College	H. G. Reed, A. B
125	Williamston	Williamston Female College	S. Lander, A. M., D. D
	TENNESSEE.		
126	Brownsville	Brownsville Female College	Th. Smith, A. M
127	....do	Wesleyan Female College	Rev. John Williams, A. M
128	Columbia	Columbia Athenæum	Robert D. Smith, A. M
129	Franklin	Tennessee Female College	M. Thomas Edgerton *e*
130	Gallatin	Howard Female College	A. M. Burney, A. M

* Statistics of 1888-89 *a* Died February 17, 1891. *b* Succeeded by B. F. Dixon.

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r 1889–90.—DIVISION B—Continued.

Professors and instructors.			Students.					Number of State scholarships.	Number of other scholarships.	Number of volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Amount of productive funds.	Benefactions.	
Male.	Female.	Total.	Preparatory department.	Academic department.	Collegiate department.	Resident graduates.	Total number.								
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
4	44	48	385	249	114	8	766	0	31	5,520	$11,219	$214,759	0	$1,332	86
2	8	10	5	59	22	.....	102	0	0	1,800	.....	24,000	.....	330	87
1	10	11	20	.....	114	.....	134	0	0	500	.....	100,000	0	0	88
2	7	9	24	100	36	.....	160	0	1	100	500	25,000	0	0	89
3	4	7	16	.....	36	.....	56	.....	.....	800	0	10,000	0	0	90
4	11	15	.....	.....	.....	.....	165	.....	.....	2,000	1,000	75,000	.....	.....	91
2	7	9	87	.....	.....	.....	87	.....	.....	.....	.....	.....	.....	.....	92
1	5	6	15	22	10	.....	47	0	0	50	20	10,000	0	70	93
2	9	11	46	.....	44	1	91	0	0	100	150	25,000	0	0	94
2	3	5	6	8	55	.....	69	0	12	4,000	2,000	40,000	0	.....	95
2	4	6	.....	.....	.....	.....	42	0	0	.....	.....	15,000	.....	.....	96
2	7	9	40	(70)		3	113	.....	.....	600	500	15,000	.....	.....	97
5	2	7	31	74	13	.....	118	.....	.....	.....	.....	.....	.....	.....	98
3	10	13	12	13	111	.....	136	.....	.....	1,500	500	80,000	0	0	99
4	27	31	35	.....	183	9	280	0	0	5,030	1,000	200,000	$4,000	500	100
2	4	6	48	54	17	.....	119	0	0	400	.....	20,000	0	.....	101
2	4	6	.....	.....	.....	.....	98	0	0	500	.....	8,000	0	0	102
3	9	12	39	.....	86	.....	125	0	0	1,000	.....	40,000	0	.....	103
4	11	15	.....	.....	.....	2	80	0	0	1,100	.....	250,000	7,000	.....	104
1	11	12	29	24	57	.....	110	0	0	3,000	1,000	75,000	0	0	105
2	7	9	.....	.....	.....	.....	.....	0	0	.....	.....	20,000	0	.....	106
8	8	16	87	.....	18	.....	105	0	7	.....	.....	55,000	70,000	20,000	107
3	19	22	28	.....	142	2	170	.....	.....	.....	.....	.....	.....	.....	108
6	18	24	.....	.....	138	.....	138	0	0	2,500	5,450	175,000	32,000	5,000	109
1	6	7	.....	.....	.....	.....	110	.....	.....	500	.....	50,000	.....	.....	110
3	12	15	20	.....	88	.....	108	0	0	6,000	.....	150,000	0	0	111
4	17	21	49	.....	149	.....	198	0	0	3,000	3,000	95,000	0	1,000	112
3	1	4	8	38	.....	6	52	.....	.....	2,700	400	60,000	0	.....	113
1	8	9	13	23	.....	.....	39	.....	.....	50	.....	20,000	.....	.....	114
7	17	24	.....	.....	.....	4	109	.....	.....	4,000	.....	.....	.....	.....	115
3	10	13	.....	.....	.....	.....	80	.....	.....	2,500	.....	.....	.....	.....	116
16	9	25	70	.....	175	2	247	0	50	6,000	2,000	100,000	10,000	300	117
0	15	15	22	167	.....	.....	225	.....	.....	1,500	200	25,000	.....	.....	118
.....	4	4	25	20	20	.....	65	0	0	1	5	4,000	0	0	119
4	6	10	15	.....	135	.....	150	0	2	1,000	500	50,000	0	0	120
1	10	11	75	.....	110	.....	185	0	0	.....	.....	15,000	1,000	0	121
2	4	6	19	.....	93	2	114	0	0	50	1,000	30,000	.....	15	122
2	12	14	34	39	150	2	225	.....	.....	1,000	.....	25,000	.....	.....	123
1	4	5	40	50	20	.....	110	.....	.....	.....	.....	5,000	.....	.....	124
2	8	10	55	36	71	4	176	0	0	1,000	800	15,000	0	0	125
2	7	9	43	44	47	2	136	0	24	.....	.....	20,000	0	0	126
.....	.....	.....	31	.....	30	.....	61	0	0	500	0	6,000	0	.....	127
5	14	19	31	60	68	10	182	0	4	8,250	6,000	50,000	0	0	128
.....	.....	20	.....	.....	.....	.....	100	.....	.....	600	300	20,000	0	.....	129
1	9	10	24	.....	100	.....	124	.....	.....	400	100	1,200	.....	.....	130

c Succeeded by Frank H. Curtiss. *d* Succeeded by Ernest E. Campbell.
e Succeeded by Wilbur F. Wilson.

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TABLE 1.—*Statistics of colleges for* [illegible]

	Location.	Name.	President.
	1	2	3
	TENNESSEE—cont'd.		
131	Jackson	Memphis Conference Female Institute.	A. W. Jones, A. M., D. D.
132	McMinnville	Cumberland Female College	N. J. Finney, A. M.
133	Murfreesboro	Soule Female College	Z. C. Graves, LL. D.
134	Nashville	Nashville College for Young Ladies.	George W. F. Price, A. M., D. D.
135	....do	Ward's Seminary for Young Ladies.	J. B. Hancock, A. M. *a*
136	Pulaski	Martin Female College	John S. Wilkes *b*
137	Rogersville	Synodical Female College	William M. Graybill
138	Winchester	Mary Sharp College	John L. Johnson, D. D., LL. D.
	TEXAS.		
139	Belton	Baylor Female College	John Hill Luther, D. D. *c*
140	Chappell Hill	Chappell Hill Female College	Edward W. Tarrant, A. M.
141	Waco	Waco Female College	R. O. Rounsavall, A. M.
	VIRGINIA.		
142	Abingdon	Stonewall Jackson Female Institute.	Miss Kate M. Hunt
143	....do	Martha Washington College	D. S. Hearon, A. M., D. D. *d*
144	Charlottesville	Albemarle Female Institute	W. P. Dickinson
145	Christiansburg	Montgomery Female College	Mrs. E. T. Baird
146	Danville	Danville College for Young Ladies	R. H. Sharp, jr., A. M.
147	....do	Roanoke Female College	J. T. Averett, A. M.
148	Glade Spring	Southwest Virginia Institute	Samuel D. Jones, B. L.
149	Gordonsville	Central Female Institute	Rodes Massie
150	Hollins	Hollins Institute	Charles L. Cocke, A. M.
151	Marion	Marion Female College	Rev. J. J. Scherer, A. M.
152	Norfolk	Norfolk College for Young Ladies	J. A. I. Cassely, B. S.
153	Petersburg	Southern Female College	Arthur K. Davis
154	Richmond	Richmond Female Institute	Miss Salley B. Hamner
155	Staunton	Sherwood Female Seminary*	Prof. J. L. Massey
156	....do	Staunton Female Seminary	Rev. James Willis, A. M.
157	....do	Virginia Female Institute	Mrs. J. E. B. Stuart
158	Warrenton	Fauquier Institute	George G. Butler, A. M.
159	Winchester	Episcopal Female Institute	A. McGill Smith, A. M.
160	....do	Valley Female College	John P. Hyde, A. M., D. D.
	WEST VIRGINIA.		
161	Clarksburg	Broaddus College*	Rev. J. L. McCutcheon, A. M.
162	Parkersburg	Parkersburg Female Seminary	Mrs. H. L. Field
163	Wheeling	Wheeling Female College	H. R. Blaisdell, PH. D., D. D.
	WISCONSIN.		
164	Fox Lake	Downer College	Mary E. Lyon, B. S., B. L.
165	Milwaukee	Milwaukee College	Charles R. Kingsley, PH. D.

* Statistics of 1888-89. *a* Succeeded by B. H. Charles. *b* Succeeded by Rev. R. M. Saunders.

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or 1889–90.—DIVISION B—Continued.

Professors and instructors.			Students.												
Male.	Female.	Total.	Preparatory department.	Academic department.	Collegiate department.	Resident graduates.	Total number.	Number of State scholarships.	Number of other scholarships.	Number of volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Amount of productive funds.	Benefactions.	
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
....	11	11	25	.....	150	....	175	0	0	4,000	$1,000	$45,000	0	0	131
4	5	9	25	25	65	....	115	0	0	1,000	1,500	50,000	.....	.....	132
3	7	10	30	.....	120	3	153	....	....	500	1,500	25,000	0	.....	133
....	....	30	.....	.....	.....	....	407	0	1	725	.....	100,000	$3,000	0	134
2	17	19	48	60	.....	4	475	....	....	3,000	500	125,000	.....	$400	135
....	12	12	20	23	106	....	149	0	0	1,100	0	30,000	30,500	.....	136
3	8	11	60	40	55	....	155	0	2	1,000	350	40,000	0	2,000	137
4	4	8	.....	.....	.....	....	109	0	0	.....	.....	10,000	.....	.....	138
4	18	22	100	100	20	....	220	....	....	1,000	100	125,000	.....	.....	139
2	5	7	35	25	55	....	115	0	4	400	75	15,000	.....	0	140
2	12	14	43	51	92	....	186	0	0	12,000	500	40,000	0	.....	141
1	7	8	21	9	41	....	81	0	0	250	200	20,000	0	600	142
3	5	8	.....	.....	.....	....	83	....	....	.....	.....	.....	.....	.....	143
3	6	9	5	.....	58	....	63	0	0	500	.....	30,000	.....	0	144
2	5	7	25	.....	54	....	79	1	0	100	.....	15,000	0	0	145
3	6	9	42	0	71	0	128	0	0	.....	.....	40,000	0	0	146
4	5	9	25	.....	75	....	100	....	....	.....	1,000	35,000	.....	.....	147
3	15	18	16	.....	144	....	160	0	3	350	150	30,000	7,500	7,500	148
1	4	5	.....	.....	.....	....	50	0	0	.....	.....	.....	.....	.....	149
8	12	20	20	.....	189	....	209	0	0	1,000	2,000	200,000	0	0	150
2	6	8	33	20	60	3	116	0	0	250	200	20,000	0	600	151
4	21	25	120	.....	200	....	320	0	3	500	1,000	60,000	.....	.....	152
3	5	8	10	.....	47	7	64	0	0	2,000	1,000	10,000	.....	.....	153
....	17	17	25	20	80	....	125	0	0	200	400	60,000	.....	.....	154
5	5	10	.....	.....	.....	....	30	....	....	.....	.....	.....	.....	.....	155
6	5	11	.....	15	49	1	75	....	....	.....	.....	.....	.....	.....	156
3	15	18	3	30	80	....	113	....	3	500	.....	40,000	.....	.....	157
2	6	8	25	15	10	....	74	....	....	600	.....	10,000	.....	.....	158
5	4	9	13	14	42	5	74	....	....	1,000	500	20,000	.....	.....	159
2	9	11	6	10	28	....	118	....	....	700	75	20,000	.....	.....	160
1	6	7	11	.....	29	....	60	....	....	350	.....	10,000	.....	.....	161
0	3	3	.....	.....	.....	....	30	....	....	.....	.....	8,000	.....	.....	162
1	7	8	4	.....	50	....	54	....	....	200	200	10,000	.....	.....	163
1	7	8	42	.....	3	....	45	0	1	2,060	.....	25,000	$0,000	.....	164
4	5	9	60	.....	20	1	101	0	0	3,000	3,000	100,000	0	10,000	165

c Succeeded by P. H. Eager, A. M. *d* Succeeded by Rev. S. N. Barker.

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UNIVERSITIES AND COLLEGES.

TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART I.

	Location.	Name.	President.	Professors and instructors.						Students.										
				Number in preparatory department.	Number in collegiate department.	Number in professional departments.	Total number.			Number in preparatory department.		Number in collegiate department.		Number in graduate department.		Number in professional departments.		Total number in all departments.		
							Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	ALABAMA.																			
1	East Lake	Howard College	B. F. Riley, D. D	1	5	0	6	0	6	27	0	143	0	0	0	0	0	170	0	170
2	Greensboro	Southern University	A. S. Andrews, A. M., D. D., LL. D.	1	9	0	10	0	10	26	0	212	0	0	0	0	0	238	0	238
3	La Fayette	La Fayette College	George R. McNeill, A. M	3	1	0	4	2	6	75	95	17	20	0	0	0	0	92	115	207
4	Mobile	Spring Hill College	James Lonergan, S. J	----	----	----	20	0	20	6	0	129	0	0	0	0	0	135	0	135
5	Selma	Selma University	Charles L. Purce, D. D	5	5	0	3	4	7	225	275	8	1	1	0	25	0	259	276	535
6	University	University of Alabama	William S. Wyman, LL. D., president *pro tempore.a*	0	23	3	26	0	26	0	0	182	0	3	0	21	0	206	0	206
	ARKANSAS.																			
7	Batesville	Arkansas College	Isaac J. Long, D. D.*b*	----	----	----	6	0	6	----	----	----	----	----	----	----	----	91	50	141
8	Boonsboro	Cane Hill College	F. R. Earle, A. M., D. D	----	----	----	(3)		3	----	----	----	----	----	----	----	----	(117)		117
9	Little Rock	Little Rock University	Martin L. Curl, D. D	1	4	----	4	1	5	62	28	1	2	1	0	24	0	88	30	118
10	.....do	Philander Smith College	Rev. Thomas Mason, A. M	----	----	----	6	8	14	28	0	7	5	----	----	20	0	(178) 57	16	251
	CALIFORNIA.																			
11	Berkeley	University of California	Horace Davis, LL. D.*c*	0	38	33	67	0	67	0	0	292	88	10	5	202	8	600	101	701
12	College City	Pierce Christian College	James C. Keith, A. B	5	6	1	6	4	10	13	13	27	17	----	----	6	0	46	30	76
13	College Park	University of the Pacific*	A. C. Hirst, D. D., LL. D	8	17	----	18	9	27	230	107	55	47	2	3	----	----	327	236	563
14	Los Angeles	St. Vincent's College	A. J. Meyer, C. M	4	3	----	7	0	7	100	0	25	0	----	----	----	----	125	0	125
15	Napa	Napa College	J. N. Beard, D. D	(12)		----	6	6	12	78	86	18	12	----	----	----	----	96	98	194
16	Oakland	California College	Samuel D. Morse, D. D	----	----	----	6	8	14	50	42	5	8	----	----	----	----	61	48	109
17	San Francisco	St. Ignatius College	Henry Imoda, S. J	6	10	----	16	0	16	305	0	107	0	0	0	----	----	502	0	502
18	Santa Clara	Santa Clara College	John Pinasco, S. J	1	19	0	20	0	20	14	0	109	0	0	0	0	0	123	0	123

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																				48	24		77
																				(312)			565
19	Santa Rosa	Pacific Methodist College	J. S. Austin, A. M. *d*	1	9	----	6	3	9	27	25	15	9	1	0	------	----			143	80		
20	University	University of Southern California.	M. M. Bovard, A. M., D. D.	----	10	27	41	10	51	78	52	27	20	----	----	11	2			39	45		84
21	Woodbridge	San Joaquin Valley College.	Darius A. Mobley, A. M., D. D. *e*	4	6	----	4	2	6	27	33	12	12	----	----	------	----			40	43		83
22	Woodland	Hesperian College	A. M. Elston, A. M.	2	6	----	3	5	8	20	23	20	20	----	----	------	----						
		COLORADO.																					
23	Boulder	University of Colorado	Horace M. Hale, LL. D.	(13)		10	23	1	23	44	31	28	17	4	3	17	6	93	57		150		
24	Colorado Springs	Colorado College	Wm. Frederick Slocum, jr.	13	13	----	10	3	13	64	30	34	16	----	----	------	----	98	46		144		
25	Del Norte	Presbyterian College of the Southwest.	Rev. Henry M. Goodell, A. M.	(8)		----	1	2	3	18	6	3	3	----	----	------	----	21	9		30		
26	University Park	University of Denver	W. F. McDowell, A. M., S. T. B., chancellor.	11	6	31	45	12	57	(139)		12	6	----	----	------	----	(853)			871		
																		12	6				
		CONNECTICUT.																					
27	Hartford	Trinity College	George Williamson Smith, D. D. LL. D.	0	16	0	16	0	16	0	0	136	0	0	0	0	0	136	0		136		
28	Middletown	Wesleyan University	Bradford Paul Raymond, D. D., LL. D.	0	23	0	23	0	23	0	0	206	21	6	0	0	0	212	21		233		
29	New Haven	Yale University	Timothy Dwight, D. D., LL. D.	0	46	58	143	0	143	0	0	736	0	81	0	301	0	1,445	32		1,477		
		DELAWARE.																					
30	Newark	Delaware College	Albert N. Raub, A. M., PH. D.	0	8	0	8	0	8	0	0	82	0	0	0	0	0	82	0		82		
		DISTRICT OF COLUMBIA.																					
31	Washington	Columbian University	James C. Welling, LL. D	10	18	20	46	0	46	100	0	147	20	0	0	339	12	586	32		618		
32	------do	Georgetown University	Joseph Havens Richards, S. J.	29	18	36	83	0	83	157	0	82	0	0	0	308	0	547	0		547		
33	------do	Howard University	J. E. Rankin, D. D., LL. D.	4	6	28	30	11	41	29	2	22	0	0	0	171	5	316	49		365		
34	------do	National Deaf-Mute College.	Edward M. Gallaudet, PH. D., LL. D.	0	8	----	8	0	8	0	0	38	8	0	0	0	0	38	8		46		
		FLORIDA.																					
35	De Land	John B. Stetson University	John F. Forbes, A. M., PH. D.	9	6	----	4	5	9	42	68	0	1	0	0	0	0	42	69		111		
36	Leesburg	Florida Conference College	T. W. Moore, D. D. *f*	3	4	----	4	3	7	30	30	30	30	----	----	------	----	60	60		120		
37	Orange City	St. John's River Conference College. *g*	Rev. C. W. Harshman	----	----	----	2	2	4	----	----	10	3	----	----	------	----	10	3		13		
38	Winter Park	Rollins College	Edward P. Hooker, D. D	4	8	0	6	6	12	53	45	4	3	0	0	0	0	57	48		105		
		GEORGIA.																					
39	Athens	University of Georgia	William E. Boggs, D. D., LL. D.	0	13	15	28	0	28	0	0	160	0	1	0	158	0	319	0		319		
40	Atlanta	Atlanta University	Horace Bumstead, D. D	21	7	0	7	16	23	282	377	17	1	0	0	0	0	299	378		677		
41	Bowdon	Bowdon College	F. H. M. Henderson, D. D. *h*	1	2	0	2	1	3	35	12	32	15	0	0	0	0	67	27		94		

* Statistics of 1888-89.

a Richard C. Jones, LL. D., has since been elected president.

b Deceased. Eugene R. Long, PH. D., chairman.

c Resigned. Martin Kellogg, A. M., president-elect.

d Succeeded by D. C. Kelley, D. D.

e Succeeded by J. G. Huber.

f Succeeded by Rev. Henry E. Partridge, A. M.

g Suspended at close of year 1889-90.

h Succeeded by Rev. Frank J. Amis, B. S.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART I—Continued.

	Location.	Name.	President.	Professors and instructors.						Students.									
				Number in preparatory department.	Number in collegiate department.	Number in professional departments.	Total number.			Number in preparatory department.		Number in collegiate department.		Number in graduate department.		Number in professional departments.		Total number in all departments.		
							Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	IOWA—continued.																			
94	Fairfield	Parsons College	Ambrose C. Smith, D. D.	(10)		0	10	0	10	45	30	73	46	3	0	0	0	121	76	197
95	Fayette	Upper Iowa University	J. W. Bissell, A. M., D. D.	7	8	0	10	9	19	167	82	96	31	3	1	----	----	(178) 266	114	558
96	Grinnell	Iowa College	Rev. George A. Gates	7	14	0	19	8	27	116	59	163	126	----	----	----	----	(124) 279	185	588
97	Hopkinton	Lenox College	Alexander G. Wilson, D. D.	6	8	----	6	2	8	28	29	38	42	0	0	0	0	66	71	137
98	Indianola	Simpson College	E. M. Holmes, B. D	(7)		0	4	3	7	65	64	59	29	0	0	0	0	124	93	217
99	Iowa City	State University of Iowa	Chas. A. Schaeffer, A. M., PH. D	0	26	55	51	6	57	0	0	189	99	0	9	488	21	609	128	737
100	Mount Pleasant	German College	Rev. Jno. Schlagenhauf, A. M.	4	----	----	8	3	11	24	8	8	2	----	----	20	0	(83) 52	10	145
101	....do	Iowa Wesleyan University	J. T. McFarland, D. D. G.	4	12	----	14	2	16	122	81	53	32	----	----	----	----	175	113	288
102	Mount Vernon	Cornell College	William F. King, D. D., LL. D.	12	12	----	14	10	24	253	151	150	89	----	----	----	----	408	240	643
103	Oskaloosa	Oskaloosa College	A. M. Haggard, A. M	(8)		----	4	4	8	46	57	18	12	----	----	----	----	64	69	133
104	....do	Penn College	Benjamin Trueblood, LL. D. *b*	3	6	----	8	1	9	38	46	38	32	----	----	----	----	76	78	154
105	Pella	Central University of Iowa	Rev. S. J. Axtell, A. M. *c*	2	4	----	4	2	6	58	28	6	8	----	----	----	----	64	36	100
106	Tabor	Tabor College	Rev. William M. Brooks, A. M.	6	8	0	9	5	14	87	73	19	25	----	----	----	----	106	98	204
107	Toledo	Western College	J. S. Mills, PH. D	5	12	----	18	5	23	72	21	44	23	13	0	----	----	(202) 129	44	375
108	Waverly	Wartburg College	G. Grossmann	----	6	----	6	0	6	0	0	62	0	----	----	----	----	62	0	62
	KANSAS.																			
109	Atchison	Midland College	Jacob A. Clutz, D. D.	2	5	----	4	3	7	40	18	20	6	----	----	----	----	60	24	86
110	....do	St. Benedict's College	Innocent Wolf, D. D., O. S. B.	8	8	2	17	0	17	130	0	41	0	----	----	6	0	167	0	167
111	Baldwin	Baker University	Rev. W. M. Quayle, A. M	6	8	----	9	5	14	200	80	80	42	----	----	----	----	280	122	402
112	Emporia	College of Emporia	John F. Hendy, D. D	(11)		----	8	3	11	61	38	24	12	----	----	----	----	85	50	135
113	Highland	Highland University	Rev. Albert B. Irwin, A. M	11	6	----	9	3	11	44	56	14	8	----	----	----	----	58	64	122
114	Holton	Campbell University	E. J. Hoenshel	----	----	----	5	6	11	200	200	19	10	----	----	----	----	219	210	429

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115	Lawrence	University of Kansas	Francis Huntington Snow, PH. D.	....	25	5	30	3	33	90	48	140	59	10	7	85	3	335	174	509
116	Lecompton	Lane University*	J. A. Weller, D. D., PH. D.*d*	10	5	....	9	2	11	62	51	27	12	....	....	.....	....	(112) 89	62	264
117	Lindsborg	Bethany College	C. A. Swensson, A. M	9	7	....	13	4	17	63	52	20	6	0	0	0	0	186	120	306
118	Ottawa	Ottawa University	Geo. Sutherland, A. M., B.D.*e*	6	6	....	6	2	8	82	41	39	14	.....	.....	.....	.....	130	135	265
119	St. Marys	St. Mary's College	Henry J. Votel, S. J	7	9	0	16	0	16	162	0	68	0	0	0	0	0	230	0	230
120	Salina	Kansas Wesleyan University	Aaron Schuyler, A. M., LL. D.	7	8	0	10	3	13	93	59	11	11	0	0	0	0	104	70	174
121	Sterling	Cooper Memorial College	F. M. Spencer, D. D	....	3	....	4	2	6	30	22	7	1	....	....	.....	....	(70) 37	28	130
122	Topeka	Washburn College	Peter McVicar, A. M., D. D	(12)		....	7	5	12	120	79	42	17	....	....	.....	....	173	120	293
123	Wichita	Garfield University*f*	Harvey W. Everest, A. M., LL. D	7	6	13	31	4	35	86	44	30	15	....	....	59	0	(378) 175	59	612
	KENTUCKY.																			
124	Berea	Berea College	William B. Stewart, D. D	10	9	0	7	12	19	178	146	22	11	0	0	0	0	200	157	357
125	Bowling Green	Ogden College	William A. Obenchain, A. M.	(4)		....	4	0	4	41	0	34	0	0	0	0	0	75	0	75
126	Danville	Center College of Kentucky	W. C. Young, D. D	3	8	....	11	0	11	94	0	110	0	.....	.....	.....	.....	204	0	204
127	Eminence	Eminence College	W. S. Giltner, A. M	3	6	....	3	5	8	....	....	....	....	....	....	0	0	22	70	93
128	Georgetown	Georgetown College	Richard M. Dudley, D. D	3	7	....	10	0	10	40	0	97	0	0	0	0	0	137	0	137
129	Hopkinsville	South Kentucky College	James E. Scobey, A. M.*g*	3	6	0	5	4	9	15	6	39	44	0	0	0	0	54	50	104
130	Lancaster	Garrard College	J. C. Gordon, B. S	1	6	....	4	4	8	15	17	29	60	.....	.....	.....	.....	49	106	155
131	Lexington	Kentucky University	Charles Louis Loos	2	9	....	23	1	24	19	0	196	26	1	0	.....	.....	987	54	1,041
132	Murray	Murray Male and Female Institute.*	W. W. Smith	3	2	....	1	4	5	....	....	....	....	....	....	.....	.....	100	81	181
133	Richmond	Central University of Kentucky.	L. H. Blanton, D. D., chancellor.	3	10	28	31	0	31	50	0	102	0	3	0	186	0	326	0	326
134	Russellville	Bethel College	Rev. W. S. Ryland, A. M., PH. D.	1	6	0	7	0	7	40	0	141	0	0	0	0	0	181	0	181
135	St. Marys	St. Mary's College	Rev. David Fennessy, C. S	1	10	0	11	0	11	3	0	126	0	0	0	0	0	129	0	129
136	South Carrollton	West Kentucky Classical and Normal College.	E. M. Coleman, A. M	2	11	0	8	5	13	50	40	100	50	0	0	0	0	150	90	240
137	Winchester	Kentucky Wesleyan College.	D. W. Batson	....	....	....	5	0	5	....	....	....	....	....	....	.....	.....	135	0	135
	LOUISIANA.																			
138	Arcadia	Arcadia Male and Female College.	J. W. Beeson, A. M	2	6	0	3	5	8	69	70	30	49	0	0	0	0	99	119	218
139	Baton Rouge	Louisiana State University and Agricultural and Mechanical College.	Col. J. W. Nicholson, A. M	2	11	0	13	0	13	85	0	72	0	0	0	0	0	157	0	157
140	Convent	Jefferson College *	Thomas Henry, S. M	6	8	....	14	0	14	....	....	....	....	....	....	.....	.....	128	0	128
141	Grand Coteau	St. Charles College	Rev. W. I. Kennely, S. S	2	10	....	12	0	12	25	0	86	0	.....	.....	.....	.....	111	0	111
142	Jackson	Centenary College of Louisiana.	W. L. C. Hunnicutt, D. D	(10)		....	8	2	10	73	0	64	0	.....	.....	.....	.....	137	0	137
143	Keatchie	Keatchie College	C. W. Tompkies	3	6	0	4	5	9	23	28	47	57	0	0	0	0	70	85	155
144	New Orleans	College of the Immaculate Conception.	Rev. David McKinlry, S. J	6	11	....	18	0	18	187	0	269	0	10	0	0	0	466	0	466
145	New Orleans	Leland University	Edward C. Mitchell, D. D	6	7	2	6	7	13	182	146	1	0	.....	.....	20	0	199	152	351

* Statistics of 1888-89.
a Succeeded by Rev. C. L. Stafford, D. D.
b Succeeded by Absalom Rosenberger, A. B., LL. B.
c Succeeded by Rev. John Stuart, A. M., B. D.
d Succeeded by Rev. C. M. Brooke, A. M.
e Succeeded by Franklin Johnson, D. D.
f Suspended.
g Succeeded by A. C. Kuy Kendall.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART I—Continued.

	Location.	Name.	President.	Professors and instructors.						Students.										
				Number in preparatory department.	Number in collegiate department.	Number in professional departments.	Total number.			Number in preparatory department.		Number in collegiate department.		Number in graduate department.		Number in professional departments.		Total number in all departments.		
							Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	LOUISIANA—cont'd.																			
146	New Orleans	New Orleans University	L. G. Adkinson, A. M., D. D.	12	4	7	14	12	26	175	205	4	3	----	----	28	0	206	252	458
147	....do	Southern University	H. A. Hill	9	3	----	2	7	9	148	259	3	4	----	----	----	----	151	263	414
148	....do	Straight University	Rev. R. C. Hitchcock, A. M.	16	5	1	6	10	16	276	269	3	0	0	0	19	0	292	269	561
149	....do	Tulane University of Louisiana.	Wm. Preston Johnston, LL. D.	19	23	31	66	7	73	180	42	84	123	4	0	422	0	883	356	1,239
	MAINE.																			
150	Brunswick	Bowdoin College	William DeWitt Hyde, D. D.	0	16	11	27	0	27	0	0	184	0	0	0	77	0	261	0	261
151	Lewiston	Bates College	Oren B. Cheney, D. D.	0	9	4	13	0	13	0	0	104	35	----	----	16	0	120	35	155
152	Waterville	Colby University	Albion Woodbury Small, PH. D	0	13	0	13	0	13	0	0	127	26	0	0	0	0	127	26	153
	MARYLAND.																			
153	Annapolis	St. John's College	Thomas Fell, A. M., PH. D., LL. D	4	8	0	12	0	12	61	0	93	0	0	0	0	0	154	0	154
154	Baltimore	Johns Hopkins University	Daniel C. Gilman, A. M., LL. D.	0	58	0	58	0	58	0	0	175	0	229	0	0	0	404	0	404
155	....do	Loyola College	Rev. F. A. Smith, S. J.	----	11	----	11	0	11	----	----	110	0	----	----	----	----	110	0	110
156	....do	Morgan College	Francis J. Wagner	----	----	----	7	3	10	----	----	----	----	----	----	----	----	92	59	151
157	Chestertown	Washington College	C. W. Reid, PH. D.	1	3	0	4	0	4	40	0	30	0	0	0	0	0	70	0	70
158	Ellicott City	Rock Hill College	Brother Denis	7	8	----	12	0	12	110	0	30	0	----	----	----	----	140	0	140
159	....do	St. Charles' College	F. L. Dumont, D. D.	4	13	0	17	0	17	98	0	161	0	0	0	0	0	259	0	259
160	Mount St. Marys	Mount St. Mary's College	Edward P. Allen, D. D	14	16	6	36	0	36	55	0	60	0	----	----	27	0	173	0	173
161	New Windsor	New Windsor College and Windsor Female College.	A. M. Jelly, A. M., D. D	6	8	----	5	7	12	50	52	20	22	----	----	----	----	70	74	144
162	Westminster	Western Maryland College	Thomas H. Lewis, D. D	6	16	----	12	10	22	52	29	67	63	1	6	----	----	120	98	218
	MASSACHUSETTS.																			
163	Amherst	Amherst College	Julius H. Seelye, D. D., LL. D.	0	27	0	27	0	27	0	0	[illegible]	0	1	0	0	0	[illegible]	0	[illegible]
164	Boston	Boston College	Robert Fulton, S. J.	0	12	0	12	0	12	0	0	[illegible]	0	0	0	0	0	[illegible]	0	[illegible]

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																				928
165	do	Boston University	William F. Warren, D.D., LL.D	0	22	83	114	4	118	0	0	115	177	76	24	364	53	672	256	2,120
166	Cambridge	Harvard University	Charles William Eliot, LL.D.	0	101	....	217	0	217	0	0	1,274	0	112	0	668	0	2,126	0	40
167	Springfield	French Protestant College	Calvin E. Amaron, A.M., B.D.	3	6	....	8	1	9	....	....	....	....	....	....	....	....	(40)	....	150
168	Tufts College	Tufts College	Elmer Hewitt Capen, D.D.	0	13	6	18	0	18	0	0	107	0	9	0	34	0	150	0	312
169	Williamstown	Williams College	Franklin Carter, PH.D., LL.D.	0	24	0	24	0	24	0	0	311	0	1	0	0	0	312	0	60
170	Worcester	Clark University	G. Stanley Hall, PH.D., LL.D.	0	0	0	60	0	60	0	0	0	0	60	0	0	0	60	0	264
171	do	College of the Holy Cross	Michael A. O'Kane, S.J.	8	10	0	18	0	18	112	0	152	0	0	0	0	0	264	0	
	MICHIGAN.																			
172	Adrian	Adrian College	J. F. McCulloch, A.M., PH.B.	....	8	3	8	3	11	69	20	40	16	1	0	34	0	115	65	180
173	Albion	Albion College	Lewis R. Fiske, D.D., LL.D.	2	11	....	15	10	25	96	83	75	43	3	0	....	....	241	255	496
174	Alma	Alma College	George F. Hunting, D.D.*d*		(15)		9	6	15	88	121	3	11	....	....	....	....	91	132	223
175	Ann Arbor	University of Michigan	James B. Angell, LL.D	0	53	43	95	1	96	0	0	663	262	56	22	1,070	85	1,789	369	2,158
176	Battle Creek	Battle Creek College	William W. Prescott, A.M.	4	23	....	16	11	27	93	84	223	163	....	....	....	....	316	247	563
177	Benzonia	Benzonia College	S. B. Harvey, A.M.	5	0	0	4	1	5	39	36	....	....	....	....	....	....	39	33	75
178	Detroit	Detroit College	Rev. M. P. Dowling, S.J.	8	8	0	16	0	16	227	0	52	0	0	0	0	0	279	0	279
179	Hillsdale	Hillsdale College	George F. Mosher, A.M.	7	7	4	14	4	18	64	33	90	35	0	1	78	5	232	74	306
180	Holland	Hope College	Charles Scott, D.D.	2	7	2	12	1	13	81	15	46	1	0	0	8	0	165	128	293
181	Kalamazoo	Kalamazoo College	Monson A. Willcox, D.D.*e*		(10)		8	2	10	79	63	24	14	....	....	....	....	103	77	180
182	Olivet	Olivet College	Horatio Butterfield, D.D.*d*	4	9	....	12	5	17	89	40	62	63	1	1	0	0	(72) 152	104	328
	MINNESOTA.																			
183	Collegeville	St. John's University	Bernard Locnikarx, D.D	4	12	4	20	0	20	40	0	95	0	22	0	18	0	167	0	167
184	Hamline	Hamline University	G. H. Bridgman, D.D.		(12)		11	1	12	93	117	37	43	....	....	....	....	130	160	290
185	Minneapolis	Augsburg Seminary	Georg Sverdrup		(5)	2	7	0	7	61	0	58	0	....	....	41	0	160	0	160
186	do	University of Minnesota	Cyrus Northrop, LL.D.	0	22	84	101	2	103	0	0	345	171	23	25	254	11	770	232	1,002
187	New Ulm	Dr. Martin Luther College	Rev. O. Hoyer	....	....	....	6	0	6	11	0	11	0	....	....	17	0	95	0	95
188	Northfield	Carleton College	James W. Strong, D.D.	2	14	....	12	8	20	80	97	37	38	0	1	....	....	119	180	299
189	do	St. Olaf College	Rev. Thorbjörn Mohn	4	4	....	7	1	8	90	30	24	2	....	....	....	....	114	32	146
190	St. Paul	Macalester College	David J. Burrell, D.D.		(10)		10	0	10	55	0	31	0	....	....	....	....	86	0	86
191	Winnebago City	Parker College	Rev. Gideon A. Burgess, A.M.	....	....	....	2	4	6	53	62	7	8	....	....	....	....	60	70	130
	MISSISSIPPI.																			
192	Clinton	Mississippi College	W. S. Webb, D.D.	2	7	....	8	1	9	239	5	105	5	....	....	....	....	344	10	354
193	Daleville	Cooper Normal College	Tom F. McBeath	4	4	....	4	4	8	30	40	70	85	....	....	....	....	100	125	225
194	Harperville	Hunt and Huddleston College	Charles A. Huddleston, A.M.	2	7	....	4	4	8	17	14	61	37	....	....	....	....	78	51	129
195	Holly Springs	Rust University	C. E. Libbey, S.T.D.	....	....	....	9	6	15	....	....	....	....	....	....	....	....	133	182	314
196	Holmesville	Kavanaugh College	G. W. Lighty	....	....	....	2	6	8	....	....	....	....	....	....	....	....	38	46	84
197	University	University of Mississippi	Edward Mayes, LL.D.	....	11	1	12	0	12	36	3	171	7	11	2	16	0	234	12	246
	MISSOURI.																			
198	Bolivar	Southwest Baptist College	J. M. Leavitt, A.M., PH.D.*f*	2	4	0	5	1	6	20	16	40	31	....	....	....	....	60	47	107
199	Bowling Green	Pike College	Ernest W. Dow, A.M.*g*		(7)		0	2	5	7	28	50	20	30	0	0	0	0	48	80	128

* Statistics of 1888-89.

a Succeeded by Oscar Atwood, A.M.

b Since succeeded by Merrill Edwards Gates, PH.D., LL.D., L.H.D.

c Succeeded by Rev. Edward I. Devitt, S.J.

d Resigned.

e Succeeded by Rev. Theo. Nelson, A.M., LL.D.

f Succeeded by W. H. Burnham.

g Succeeded by Will Z. Long, A.M.

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TABLE 2.—*Statistics of universities and colleges for 1889–90.*—PART I—Continued.

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				Number in preparatory department.	Number in collegiate department.	Number in professional departments.	Total number.			Number in preparatory department.		Number in collegiate department.		Number in graduate department.		Number in professional departments.		Total number in all departments.		
							Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	MISSOURI—cont'd.																			
200	Canton	Christian University	Simpson Ely, A. M	1	10	3	9	1	10	30	20	26	21	0	1	22	0	78 (13)	42	133
201	Cape Girardeau	St. Vincent's College	Rev. F. V. Nugent, C. M	4	10	4	15	0	15	30	0	56	0			23	0	109	0	109
202	Carthage	Carthage Collegiate Institute.	Rev. Dwight C. Hanna	(5)			4	3	7	16	16	8	19					31	51	82
203	Columbia	University of the State of Missouri.	M. M. Fisher, D. D., LL. D., acting president.a			38	65	2	67	85	19	154	24	7	3	326	0	646	91	737
204	Edinburg	Grand River College*	Rev. J. B. Weber, A. M.b	1	4		3	2	5	25	20	10	30					35	50	85
205	Fayette	Central College	John D. Hammond, D. D	5	7		8	0	8	122	0	50	0					172	0	172
206	Fulton	Westminster College*	Rev. Wm. Hoge Marquess	1	8		9	0	9	50	0	75	0					125	0	125
207	Glasgow	Lewis College c	J. C. Horn	(4)			4	0	4	20	22	8	2					30	27	57
208	——do	Pritchett School Institute	J. S. Kendall d	2	5		4	3	7	13	10	30	27	0	2			43	39	82
209	Harris	Harris College	Charles C. Swafford, A. M., M. S.e	2	9		7	4	11	55	45	29	34					84	79	163
210	La Belle	Western College	W. B. Anderson, A. M., PH. D	3	6		6	3	9	18	15	68	99					86	114	200
211	La Grange	La Grange College	J. F. Cook, A. M., LL. D		6		4	4	8			60	55					84	58	142
212	Liberty	William Jewell College	James G. Clark, LL. D	6	7	0	8	0	8	147	0	81	0	2	0	0	0	230	0	230
213	Marshall	Missouri Valley College	William H. Black, D. D	(6)			5	1	6	89	51	7	0	0	2			(4) 96	53	153
214	Morrisville	Morrisville College	Rev. J. B. Ellis	2	5		3	4	7	9	6	89	60					98	66	164
215	Neosho	Scarritt Collegiate Institute.	Charles C. Woods, D. D		11		6	5	11			104	99					104	99	203
216	Parkville	Park College	L. M. McAfee, principal	4	7		7	4	11	128	99	52	33					180	132	312
217	St. Louis	College of the Christian Brothers.	Rev. Brother Paulian	10	7		26	0	26	150	0	55	0	1	0			206	0	206
218	——do	St. Louis University	Edward J. Gleeson, S. J.f	4	13		23	0	23	55	0	260	0					446	0	446
219	——do	Washington University	Marshall S. Snow, A. M., acting chancellor.g	46	25	9	73	35	108	814	186	97	13			78	0	989	386	1,375

																			50	66	116
220	Shelbina	Shelbina Collegiate Institute.	T. E. Peters	1	4		2	3	5	10	11	40	55					161	103	264
221	Springfield	Drury College	Francis T. Ingalls, D. D	11	8		9	3	12	133	91	28	12					(92)		147
222	Tarkio	Tarkio College	Rev. J. A. Thompson, A. M	(10)			5	5	10	15	11	20	9					85	20	191
223	Trenton	Avalon College	F. A. Z. Kumler, A. M	(6)			4	2	6	60	38	62	31					122	69	
224	Warrenton	Central Wesleyan College	H. A. Koch, D. D	2	4	2	11	0	11	(142)		(44)				29	0	(216) 29		245
	MONTANA.																				
225	Deer Lodge	College of Montana	Rev. James Reid, A. B	2	6	0	6	2	8	37	29	4	10	0	0	0	0	41	39	80
	NEBRASKA.																				
226	Bellevue	Bellevue College	David R. Kerr, PH. D., D. D	6	8		3	5	8	12	8	6	4	7	0			25	12	37
227	Crete	Doane College	Rev. David B. Perry, A. M	(9)			8	1	9	31	23	28	13					59	36	95
228	Lincoln	Cotner University	David R. Dungan, A. M	7	2	1	9	1	10	23	12	3	2			8	0	63	75	138
229	....do	University of Nebraska	Charles E. Bessey, PH. D., acting chancellor. *a*	8	26	0	26	3	29	88	50	142	94	12	3			264	211	475
230	Neligh	Gates College	Henry K. Warren, A. M	(9)			5	4	9	45	66	6	5					51	71	122
231	Omaha	Creighton College	Thomas S. Fitzgerald, S. J. *b*	3	9		12	0	12	60	0	135	0					195	0	195
232	University Place	Nebraska Wesleyan University.	C. F. Creighton, D. D	(14)			9	5	14	64	28	22	11	0	0	0	0	86	39	125
	NEVADA.																				
233	Reno	University of Nevada	Stephen A. Jones, A. M., PH. D.	2	8		8	2	10	40	47	24	26					64	73	137
	NEW HAMPSHIRE.																				
234	Hanover	Dartmouth College	Sam'l C. Bartlett, D. D., LL. D.	0	19	15	47	0	47	0	0	256	0	0	0	74	0	417	0	417
	NEW JERSEY.																				
235	Newark	St. Benedict's College	Hilary Pfraengle, D. D., O. S. B	2	8	1	11	0	11	20	0	77	0			2	0	99	0	99
236	New Brunswick	Rutgers College	Merrill E. Gates, PH. D., LL. D., L. H. D. *c*	0	23	0	23	0	23	0	0	186	0	1	0	0	0	187	0	187
237	Princeton	College of New Jersey	Francis L. Patton, D. D., LL. D.	0	45		45	0	45	0	0	652	0	117	0	0	0	769	0	769
238	Vineland	College of the Sacred Heart	Eugene H. Porcile, S. P. M. *k*	2	10		12	0	12	32	0	40	0					86	0	86
	NEW MEXICO.																				
239	Albuquerque	Albuquerque College *l*	Rev. Caleb I. Mills, A. M	7			2	5	7	88	77							88	77	165
	NEW YORK.																				
240	Alfred Center	Alfred University	J. Allen, D. D., PH. D., LL. D. *m*			4	12	5	17	105	111	70	47	6	4	6	0	187	162	349

* Statistics of 1888–89.
a Richard H. Jesse, LL. D., has since been elected president
b Succeeded by W. H. Owen, A. B.
c Suspended March, 1891.
d Succeeded by Charles C. Hemenway.
e Succeeded by Alfred N. Cook, A. M.
f Succeeded by Rev. Joseph Grimmelsman, S. J.
g Winfield S. Chaplin elected chancellor August, 1891.
h James H. Canfield, chancellor after July 1, 1891.
i Succeeded by Rev. James F. X. Hoeffer, S. J.
j Succeeded by Austin Scott, PH. D., December 22, 1890.
k Succeeded by Rev. F. H. Guicheteau, S. P. M.
l Suspended.
m Deceased.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART I—Continued.

	Location.	Name.	President.	Professors and instructors.						Students.										
				Number in preparatory department.	Number in collegiate department.	Number in professional departments.	Total number.			Number in preparatory department.		Number in collegiate department.		Number in graduate department.		Number in professional departments.		Total number in all departments.		
							Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	NEW YORK—cont'd.																			
241	Allegany	St. Bonaventure's College	Joseph F. Butler, O. S. F	9	10	6	15	0	15	66	0	60	0	----	----	35	0	161	0	161
242	Annandale	St. Stephen's College	Robert B. Fairbairn, D. D., LL. D.	4	7	----	8	0	8	20	0	61	0	----	----	------	----	81	0	81
243	Brooklyn	Polytechnic Institute of Brooklyn.	David H. Cochran, PH. D., LL. D.	28	14	0	40	2	42	589	0	218	0	7	0	------	----	794	0	794
244	------do	St. Francis College	Brother Jerome, O. S. F	4	6	----	22	0	22	38	0	22	0	----	----	------	----	256	0	256
245	------do	St. John's College	Rev. J. A. Hartnett, C. M	(10)		----	10	0	10	----	----	----	----	----	----	------	----	150	0	150
246	Buffalo	Canisius College	Rev. J. Ulric Heinzle, S. J	1	15	0	16	0	16	33	0	240	0	----	----	------	----	288	0	288
247	Canton	St. Lawrence University	Alpheus Baker Hervey, PH. D	0	8	4	12	0	12	0	0	47	21	9	5	24	2	80	28	108
248	Clinton	Hamilton College	Henry Darling, D. D., LL. D.	0	14	0	14	0	14	0	0	153	0	0	0	0	0	153	0	153
249	Fordham	St. John's College	Rev. John Scully, S. J	12	19	0	31	0	31	190	0	139	0	0	0	0	0	329	0	329
250	Geneva	Hobart College	Eliphalet Nott Potter, D. D., D. C. L., LL. D.	0	12	0	12	0	12	0	0	67	0	0	0	0	0	67	0	67
251	Hamilton	Colgate University	Ebenezer Dodge, D. D., LL. D. *b*	0	16	6	16	0	16	0	0	136	0	0	0	56	0	192	0	192
252	Ithaca	Cornell University	Charles Kendall Adams, LL. D	0	100	4	104	0	104	0	0	979	175	73	11	105	0	1,143	186	1,329
253	New York	College of St. Francis Xavier	Rev. David A. Merrick, S. J	7	16	----	21	0	21	169	0	323	0	0	0	0	0	492	0	492
254	------do	College of the City of New York.	Alexander Stewart Webb, LL. D.	13	29	0	42	0	42	756	0	675	0	----	----	------	----	1,431	0	1,431
255	------do	Columbia College	Seth Low, LL. D	0	38	106	180	0	180	0	0	269	10	70	0	1,075	0	1,661	10	1,671
256	------do	Manhattan College	Brother Justin, F. S. C	8	10	0	18	0	18	198	0	119	0	0	0	0	0	317	0	317
257	------do	University of the City of New York.	Henry M. MacCracken, D. D., LL. D., chancellor.	0	24	58	82	0	82	0	0	125	0	95	5	775	0	995	5	1,000
258	Niagara University	Niagara University	Patrick V. Kavanagh, C. M	10	8	6	24	0	24	97	0	48	0	0	0	34	0	179	0	179
259	Rochester	University of Rochester	David J. Hill, LL. D	0	18	0	13	0	13	0	0	185	0	0	0	0	0	185	0	185
260	Schenectady	Union University	Harrison E. Webster, M. D., LL. D.	0	15	35	50	0	50	0	0	124	0	0	0	c200	0	c324	0	c324
261	Syracuse	Syracuse University	Charles N. Sims, D. D., LL. D	0	18	25	43	4	47	0	0	292	90	496	210	40	4	828	280	964

	NORTH CAROLINA.																		
262	Chapel Hill	University of North Carolina	Kemp Plummer Battle, LL. D. *e*	0	16	3	18	0	18	0	0	165	0	14	0	33	0	200	0	200
263	Charlotte	Biddle University	W. F. Johnson, D. D.	(9)		3	9	0	9	105	0	45	0	----	----	9	0	156	0	156
264	Davidson	Davidson College	J. B. Shearer, D. D., LL. D	0	8	0	8	0	8	0	0	102	0	0	0	0	0	102	0	102
265	Guilford College	Guilford College	L. Lyndon Hobbs, A. M.	(8)		----	4	4	8	71	59	48	31	----	----	----	----	119	90	209
266	Mount Pleasant	North Carolina College	Rev. J. D. Shirey, A. M	3	4	0	7	0	7	63	0	33	0	0	0	0	0	96	0	96
267	Raleigh	Shaw University	H. M. Tupper, D. D	(4)		10	14	0	14	11	31	34	8	0	0	102	0	213	127	340
268	Rutherford College	Rutherford College	Robert L. Abernethy, A. M., D. D.	4	5	----	6	3	9	50	15	180	55	----	----	----	----	230	70	300
269	Salisbury	Livingstone College	J. C. Price, D. D.	4	4	----	5	3	8	87	87	18	2	----	----	----	----	121	106	227
270	Trinity College	Trinity College	John F. Crowell, A. B., LIT. D	0	8	2	8	0	8	0	0	114	0	0	0	21	0	114	0	114
271	Wake Forest	Wake Forest College	Charles E. Taylor, B. LIT., D. D	0	12	0	12	0	12	0	0	210	0	----	----	----	----	210	0	210
	NORTH DAKOTA.																			
272	Fargo	Fargo College	Rev. G. B. Barnes, A. M	(7)		----	4	3	7	20	37	1	1	0	0	0	0	42	70	112
273	University	University of North Dakota.	Homer B. Sprague, A.M., PH. D. *f*	(11)		0	10	1	11	42	28	16	8	0	0	0	0	83	68	151
	OHIO.																			
274	Akron	Buchtel College	O. Cone, D.D	6	12	----	12	10	22	86	60	67	42	2	1	----	----	(103) 155	103	361
275	Alliance	Mount Union College	Tamerlane Pliny Marsh, D.D.	7	10	----	12	3	15	154	87	145	30	4	0	----	----	363	205	568
276	Ashland	Ashland University	J. M. Tombaugh, A.M. *g*	2	4	----	6	0	6	6	2	9	3	----	----	----	----	50	46	96
277	Athens	Ohio University	Charles W. Super, A.M., PH. D.	6	10	----	10	6	16	70	27	50	16	----	----	----	----	122	49	171
278	Berea	Baldwin University	Joseph E. Stubbs, D.D., LL.D.	(18)		----	16	2	18	47	18	57	37	0	3	----	----	186	158	344
279	------do	German Wallace College	William Nast, D.D.	----	----	----	7	0	7	31	8	36	5	----	----	30	0	97	13	110
280	Cincinnati	St. Joseph's College	James Rogers, C. S. C	3	9	----	12	0	12	175	0	50	0	----	----	----	----	225	0	225
281	------do	St. Xavier College	Henry A. Schapman, S. J	7	5	----	18	0	18	219	0	71	0	----	----	----	----	419	0	419
282	------do	University of Cincinnati	Henry Turner Eddy, A.M., C. E., PH. D., acting president. *h*	0	14	63	75	0	75	----	----	89	31	----	----	779	0	869	31	900
283	Cleveland	Adelbert College of Western Reserve University.	Hiram C. Haydn, D.D., LL.D. *i*	8	14	----	20	2	22	91	35	67	5	----	----	----	----	158*	40	198
284	------do	Calvin College	H. J. Ruetenik, D.D	----	----	----	5	1	6	29	0	19	10	----	----	----	----	(85) 48	10	143
285	College Hill	Belmont College	P. V. N. Myers, A. M. *j*	8	----	----	2	6	8	13	23	----	----	0	3	----	----	13	38	51
286	Columbus	Capital University	M. Loy, D.D., *k*	3	----	----	8	0	8	52	0	71	0	----	----	31	0	154	0	154
287	------do	Ohio State University	William H. Scott, A.M., LL.D.	----	----	----	32	0	32	138	27	186	35	9	4	26	0	359	66	425
288	Delaware	Ohio Wesleyan University	James W. Bashford, A.M., B. D., PH. D.	7	15	----	17	11	28	347	170	266	218	----	----	----	----	629	488	1,117
289	Findlay	Findlay College	Rev. J. R. H. Latchaw, A.M.	4	8	2	16	6	22	43	25	29	12	0	1	9	1	122	180	302
290	Gambier	Kenyon College	William B. Bodine, A.M. *l*	6	8	4	16	0	16	87	0	38	0	----	----	4	0	129	0	129
291	Germantown	Twin Valley College	Orvon Graff Brown, A.M.	2	6	----	4	9	13	4	2	12	8	----	----	----	----	29	34	63
292	Granville	Denison University	D. B. Purinton, A.M., LL. D	4	8	0	12	0	12	124	0	96	0	0	0	0	0	207	0	207
293	Hillsboro	Hillsboro College	Fenton Gail, B. S	8	4	----	5	6	11	----	----	4	5	----	----	----	----	75	35	110

a Succeeded by M. Woolsey Stryker, D. D.
b Deceased.
c Does not include the students of the Albany Law School.
d Nonresident.
e Succeeded by George T. Winston, LL. D.
f Resigned. W. Merrifield, A.B., elected president.
g Succeeded by Rev. D. C. Christner, D.D. LL.D.
h Resigned. W. R. Benedict, dean.
i Succeeded by Rev. Charles F. Thwing, D.D.
j Succeeded by J. H. McKenzie, A.M.
k Succeeded by Rev. C. H. L. Schuette, A.M.
l Succeeded by Theodore Sterling, M.D., LL.D.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART I—Continued.

	Location.	Name.	President.	Professors and instructors.						Students.										
				Number in preparatory department.	Number in collegiate department.	Number in professional departments.	Total number.			Number in preparatory department.		Number in collegiate department.		Number in graduate department.		Number in professional departments.		Total number in all departments.		
							Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	OHIO—continued.																			
294	Hiram	Hiram College	Ely V. Zollars, A.M.	15	9	4	17	3	20	127	61	40	19	2	1	7	0	210	114	324
295	Marietta	Marietta College	John Eaton, PH.D., LL.D. *a*	4	8	0	12	0	12	71	0	100	0	0	0	0	0	171	0	171
296	New Athens	Franklin College	W. A. Williams, D.D	7	5	0	7	5	12	30	22	54	12	0	0	0	0	84	34	118
297	New Concord	Muskingum College	John D. Irons, D.D	(7)			5	2	7	37	11	53	18					90	29	119
298	Oberlin	Oberlin College	William G. Ballantine, D.D.	11	20	10	42	20	62	362	200	253	336	0	0	98	3	812	901	1,713
299	Oxford	Miami University	Ethelbert D. Warfield, A.M., LL.B. *b*	1	10	0	11	0	11	26	0	44	1	1	0	0	0	71	1	72
300	Richmond	Richmond College	George W. McMillan, PH.D., D.D.	4	5	....	5	4	9	55	44	8	1	2	0	0	0	65	45	110
301	Rio Grande	Rio Grande College	Rev. J. M. Davis, A.M.	(5)		....	3	2	5	7	8	11	7	....	....	.....	.....	18	15	33
302	Scio	Scio College*	Rev. G. B. Smith, PH. D. *c*	(11)		....	8	3	11	58	30	200	108	....	....	.....	.....	258	144	402
303	Springfield	Wittenberg College	Samuel A. Ort, D.D.	4	8	3	16	0	16	86	33	89	26	4	0	23	0	205	80	285
304	Tiffin	Heidelberg University	J. Kost, D.D., LL.D., chancellor.	2	8	3	16	1	17	94	39	90	25	2	1	11	0	187	(93) 65	347
305	Urbana	Urbana University	Thomas F. Moses, A.M., M.D.	2	5	0	4	3	7	12	15	6	4	0	0	0	0	18	19	37
306	Westerville	Otterbein University	Rev. Charles A. Bowersox, A.M. *d*	3	7	0	10	4	14	73	20	35	25	8	2	0	0	133	105	238
307	Wilberforce	Wilberforce University	Rev. S. T. Mitchell, A.M., LL.D.	9	6	4	8	5	13	65	44	4	3	0	0	10	0	97	80	177
308	Wilmington	Wilmington College	James B. Unthank, M.S.	3	6	0	7	2	9	31	47	18	17	0	0	0	0	49	64	113
309	Wooster	University of Wooster	Rev. Sylvester F. Scovel	10	17	24	43	6	49	125	39	173	62	*g*140	*g*8	60	2	558	192	750
310	Yellow Springs	Antioch College	D. A. Long, A.M., D.D., LL.D.	....	...	....	11	5	16	....	....	.....	....	....	....	.....	....	99	77	146
	OREGON.																			
311	Corvallis	Corvallis College	D. Atkins, D.D.	....	3	....	1	2	3	....	....	30	30	....	....	.....	....	30	30	60
312	Eugene	University of Oregon	John W. Johnson, A.M.	0	9	23	30	2	32	0	0	119	63	0	0	52	0	182	110	292

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313	Forest Grove	Pacific University	J. F. Ellis, A. M., D. D.[e]	2	5	....	6	2	8	52	54	19	4	....	....	.....	....	(20) 71	58	149
314	McMinnville	McMinnville College	Rev. T. G. Brownson	(4)			2	2	4	40	42	3	2					43	44	87
315	Philomath	Philomath College	Rev. William S. Gilbert, A. M.	1	3	0	3	1	4	30	14	0	0	0	0	0	0	30	14	44
316	Salem	Willamette University	Thomas Van Scoy, D. D.[f]	7	7	24	29	9	38	162	88	27	4	....	....	50	9	280	190	450
	PENNSYLVANIA.																			
317	Allegheny	Western University of Pennsylvania.	Milton B. Goff, A. M., LL. D.[g]	0	13	0	13	0	13	0	0	93	0	0	0	0	0	93	0	93
318	Allentown	Muhlenberg College	Theodore L. Seip, D. D	2	9	0	11	0	11	52	0	91	0	0	0	0	0	143	0	143
319	Annville	Lebanon Valley College	E. Benjamin Bierman, A. M.	(10)		0	6	4	10	110	63	29	15	5	0	0	0	144	78	222
320	Beatty	St. Vincent College	Andrew Hintenach, O. S. B	1	21	6	28	0	28	37	0	193	0	....	....	75	0	305	0	305
321	Beaver Falls	Geneva College	H. H. George, D. D.	1	7	0	8	0	8	10	2	69	17	....	....	....	....	79	19	98
322	Carlisle	Dickinson College	George E. Reed, D. D., LL. D.	3	11	1	15	0	15	80	9	125	13	4	0	16	0	221	22	243
323	Chester	Pennsylvania Military Academy.	Col. Charles E. Hyatt, C. E	2	12	0	14	0	14	36	0	101	0	0	0	0	0	137	0	137
324	Collegeville	Ursinus College	J. H. A. Bomberger, D. D., LL. D.[i]	5	8	6	18	0	18	68	20	53	5	....	....	8	0	129	25	154
325	Easton	Lafayette College	James H. M. Knox, D. D., LL. D.[j]	0	25	0	25	0	25	0	0	271	0	40	0	0	0	311	0	311
326	Gettysburg	Pennsylvania College	H. W. McKnight, D. D., LL. D.	4	11	....	15	0	15	60	0	153	2	....	....	.....	....	224	2	226
327	Greenville	Thiel College	Rev. W. A. Beates, A. M.[k]	....	....	....	2	0	2	30	4	70	15	....	....	.....	....	100	19	119
328	Grove City	Grove City College	Rev. Isaac C. Ketler, PH. D.[l]	7	6	....	8	5	13	(57)		(247)		....	....	.....	....	(574)		574
329	Haverford College	Haverford College	Isaac Sharpless, SC. D., LL. D.	0	15	0	15	0	15	0	0	95	0	15	0	0	0	110	0	110
330	Lancaster	Franklin and Marshall College.	Rev. John S. Stahr, PH. D	2	10	3	15	0	15	48	0	114	0	0	0	42	0	195	0	195
331	Lewisburg	Bucknell University	John Howard Harris, PH. D.	6	9	....	14	7	21	96	3	65	6	....	....	.....	....	161	143	304
332	Lincoln University	Lincoln University	Isaac N. Rendall, D. D	4	10	7	10	0	10	77	0	96	0	....	....	25	6	198	0	198
333	Loretto	St. Francis College	Athanasius M. Gleeson, O. S. F.	3	9	0	12	0	12	31	0	36	0	0	0	0	0	67	0	67
334	Meadville	Allegheny College	D. H. Wheeler, D. D., LL. D	4	8	....	11	1	12	80	36	123	25	124	13	.....	....	227	64	291
335	New Berlin	Central Pennsylvania College.	Rev. Aaron E. Gobble, A. M	3	5	....	5	1	6	38	4	34	7	....	....	.....	....	78	11	89
336	New Wilmington	Westminster College	R. G. Ferguson, D. D	(11)		....	7	4	11	34	39	82	43	....	....	.....	....	116	82	198
337	Philadelphia	La Salle College	Brother Isidore	10	8	....	15	0	15	147	0	72	0	0	0	0	0	219	0	219
338	do	St. Joseph's College	B. Villiger	9	3	....	3	9	12	190	230	84	0	....	....	.....	....	274	230	504
339	do	University of Pennsylvania.	William Pepper, M. D., LL. D.	0	67	142	180	0	180	0	0	443	36	47	7	1,060	1	1,550	44	1,594
340	Pittsburg	Holy Ghost College	John T. Murphy, C. S. SP.	5	10	....	15	0	15	75	0	100	0	....	....	.....	....	175	0	175
341	Swarthmore	Swarthmore College	William H. Appleton, A. M., PH. D[m]	....	....	....	16	10	26	47	34	80	83	1	0	.....	....	128	117	245
342	Villanova	Villanova College	Christopher A. McEvoy, O. S. A	(10)		3	13	0	13	30	0	30	0	....	....	20	0	80	0	80
343	Washington	Washington and Jefferson College.	James D. Moffat, D. D.	7	10	....	12	0	12	78	0	169	0	0	0	0	0	247	0	247
	RHODE ISLAND.																			
344	Providence	Brown University	E. B. Andrews, D. D., LL. D.	0	22	0	22	0	22	0	0	276	0	9	0	0	0	285	0	285

* Statistics of 1888–89.
a Succeeded by John W. Simpson, D. D.
b Succeeded by W. O. Thompson, D. D.
c Succeeded by William L. Dixon, D. D.
d Succeeded by Thomas J. Sanders, PH. D.
e Resigned, April 6, 1891; succeeded by Rev. Thomas McClelland, A. M.
f Succeeded by George Whitaker, D. D.
g Succeeded by W. J. Holland, PH. D., D. D.
h Resigned, May, 1890; succeeded by Rev. W. P. Johnston, A. M.
i Succeeded by H. W. Super, D. D., LL. D.
j Resigned, July, 1890; succeeded by Ethelbert D. Warfield, A. M., LL. D.
k Succeeded by Rev. F. A. Muhlenberg.
l Mostly nonresident.
m Succeeded by Charles De Garmo, PH. D.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART I—Continued.

	Location.	Name.	President.	Professors and instructors.						Students.										
				Number in preparatory department.	Number in collegiate department.	Number in professional departments.	Total number.			Number in preparatory department.		Number in collegiate department.		Number in graduate department.		Number in professional departments.		Total number in all departments.		
							Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	SOUTH CAROLINA.																			
345	Charleston	College of Charleston	Henry E. Shepherd, A.M., LL.D	....	6	....	6	0	6	....	....	28	0	....	....	....	....	28	0	28
346	Clinton	Presbyterian College of South Carolina.	J. W. Kennedy, A.M. *a*	1	3	....	4	0	4	37	0	44	0	....	....	....	....	81	0	81
347	Columbia	Allen University	Joseph W. Morris, A.M., LL.B.	4	4	7	10	6	16	....	....	6	0	7	1	19	0	200	204	404
348	....do	University of South Carolina. *b*	J. M. McBryde, PH.D., LL.D. *c*	0	23	4	26	0	26	0	0	175	0	10	0	44	0	227	0	227
349	Due West	Erskine College	W. M. Grier, D.D	1	5	....	6	0	6	26	0	57	0	....	....	....	....	83	0	83
350	Greenville	Furman University	Charles Manly, D.D.	2	5	....	7	0	7	60	0	90	0	....	....	....	....	150	0	150
351	Newberry	Newberry College	G. W. Holland, PH.D., D.D	2	6	....	8	0	8	52	0	50	0	1	0	4	0	107	0	107
352	Orangeburg	Claflin University	L. M. Dunton, A.M., D.D.	2	6	2	8	1	9	81	50	15	1	0	0	18	0	114	51	165
353	Spartanburg	Wofford College	James H. Carlisle, LL.D	3	7	....	10	0	10	107	0	112	0	....	....	....	....	219	0	219
	SOUTH DAKOTA.																			
355	East Pierre	Pierre University	William M. Blackburn, D.D.	(9)		0	4	5	9	35	49	10	11	0	0	0	0	45	60	105
356	Mitchell	Dakota University	William Brush, D.D.	....	....	....	5	3	8	....	....	....	....	....	....	....	....	80	25	105
354	Redfield	Redfield College	Rev. David Beaton *d*	2	4	0	6	3	9	40	55	5	4	....	....	....	....	45	59	104
357	Vermillion	University of South Dakota.	Howard B. Grose, A.M. *e*	6	21	....	10	8	27	147	63	48	23	4	0	....	....	241	101	406
358	Yankton	Yankton College	Rev. Dan F. Bradley, acting president.	(8)		....	8	3	11	110	50	11	10	....	....	....	....	121	60	181
	TENNESSEE.																	76	101	177
359	Bristol	King College																		
360	Chattanooga	U. S. Grant University	J. Albert Wallace, D.D.																	
361	Clarksville	Southwestern Presbyterian University.	E. S. Lewis, D.D.	8	9		5	0	5	80	0	40	0							
362	Hiwassee	Hiwassee College	O. C. Hereman, D.D., LL.D		7	10	15	2	17											
			John H. Brunner, A.M., D.D.	(8)		4	9	2	11	10	1	111	80					10	11	10

363	Jackson	Southwestern Baptist University.	George W. Jarman, LL. D.				6	0	6	38	0	128	0					41	13	54
364	Knoxville	Knoxville College	J. S. McCulloch, D. D	(12)			2	10	12	27	10	14	3			259	0	510	0	510
365	do	University of Tennessee	Charles W. Dabney, jr., PH. D., LL. D.	0	18	21	38	0	38	0	0	250	0	1	0					
366	Lebanon	Cumberland University	Nathan Green, LL. D	2	4	8	14	0	14	99	0	102	0	9	0	102	0	312	0	312
367	McKenzie	Bethel College	W. B. Sherrill. A. M		(6)		5	1	6	47	100	20	10	4	0			171	110	281
368	Maryville	Maryville College	Samuel W. Boardman, D. D., LL. D.	5	9		14	0	14	151	65	45	23					196	88	284
369	Memphis	Christian Brothers' College.	Brother Maurelian	8	7		17	0	17	154	0	69	0					263	0	263
370	Milligan	Milligan College	J. Hopwood, A. M	3	4	0	5	2	7	70	30	38	15	0	0	0	0	108	45	153
371	Mossy Creek	Carson and Newman College.	W. A. Montgomery, D. D., LL. D.	10	7	1	7	3	10	182	101	24	9			14	0	206	110	316
372	Nashville	Central Tennessee College.	J. Braden, D. D	4	2	29	22	2	24	34	9	8	1			106	0	128	10	138
373	do	Fisk University	E. M. Cravath, D. D	14	7	1	6	14	20	171	229	41	8			14	0	226	297	523
374	do	Roger Williams University.	Alfred Owen, D. D	8	5	2	9	4	13							32	0	114	105	219
375	do	Vanderbilt University	L. C. Garland, A. M., LL. D., chancellor.	0	23	46	63	0	63	0	0	161	0	8	0	498	0	637	0	637
376	Sewanee	University of the South	Thomas F. Gailor, A. M., S. T. D., vice-chancellor.	5	13	5	21	0	21	116	0	150	0	2	0	19	0	289	0	289
377	Spencer	Burritt College	W. N. Billingsley, A. M	1	2	0	3	0	3	18	16	26	30	0	0	0	0	44	46	90
378	Tusculum	Greeneville and Tusculum College.	Jere Moore, D. D				4	1	5	86	25	19	11	0	0	0	0	105	36	141
		TEXAS.																			
379	Austin	University of Texas	Leslie Waggener, A. M., LL. D.	0	15	2	14	1	15	0	0	184	42	2	2	79	0	263	44	307
380	Fort Worth	Forth Worth University	Rev. W. I. Graham, A. M. *f*				8	4	12	92	46	17	12						(44)	211
381	Galveston	St. Mary's University	Rev. T. W. Butler, S. J	1	4		5	0	5	20	0	100	0					109	58	120
382	Georgetown	Southwestern University	John H. McLean, D. D., regent.	4	12	0	10	5	15	142	49	155	78			0	0	297	140	437
383	Italy	Hope Institute	A. T. Seitz				3	2	5									100	97	197
384	Marshall	Wiley University	George Whitaker, D. D	12		1	6	6	12	141	151					4	0	141	151	292
385	Sherman	Austin College	S. M. Luckett, D. D	1	5	0	6	0	6	40	0	50	0	0	0	0	0	90	0	90
386	Tehuacana	Trinity University	D. S. Bodenhamer, PH. D., acting president. *g*	4	4		6	2	8	120	60	80	40	2	1			202	101	303
387	Thorp Spring	Add-Ran Christian University.	Addison Clark, jr., A. B	1	4	1	7	4	11									(425)		425
388	Waco	Baylor University	Rufus C. Burleson, D. D., LL. D.	4	26	0	20	6	26	125	79	322	161	0	0	0	0	447	240	687
389	do	Paul Quinn College	I. M. Burgan, D. D				4	9	13	13	9	8	9			5	0	62	123	185
		UTAH.																			
390	Salt Lake City	Univeersity of Desert	John R. Park, M. D	10	9		19	1	20	191	112	49	30					228	129	357

a Succeeded by John I. Cleland.
b Name changed to South Carolina College.
c Succeeded by James Woodrow, PH. D., M. D., D. D., LL. D.
d Succeeded by E. K. Eyerly, A. B.
e Succeeded by Joseph W. Mauck, A. M.
f Succeeded by Oscar L. Fisher, A. M., D. D.
g Rev. B. D. Cockrill since elected president.

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	Location.	Name.	President.	Professors and instructors.						Students.										
				Number in preparatory department.	Number in collegiate department.	Number in professional departments.	Total number.			Number in preparatory department.		Number in collegiate department.		Number in graduate department.		Number in professional departments.		Total number in all departments.		
							Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female	Male.	Female.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	VERMONT.																			
391	Burlington	University of Vermont and State Agricultural College.	Matthew H. Buckham, D. D.	0	15	21	42	0	42	0	0	111	21	0	0	201	0	457	31	478
392	Middlebury	Middlebury College	Ezra Brainerd, LL. D	0	9	0	9	0	9	0	0	46	8	0	0	0	0	46	8	54
	VIRGINIA.																			
393	Ashland	Randolph-Macon College	William W. Smith, A. M.	----	----	----	16	0	16	25	0	165	0	----	----	----	----	190	0	190
394	Charlottesville (University Station).	University of Virginia	William M. Thornton, LL. D., chairman.	0	22	10	31	0	31	0	0	242	0	11	0	264	0	483	0	483
395	Emory	Emory and Henry College	James Atkins, A. M. D. D.	2	8	0	10	0	10	29	0	93	0	0	0	0	0	122	0	122
396	Hampden-Sidney	Hampden-Sidney College	Richard McIlwaine, D. D	0	7	0	7	0	7	0	0	103	0	2	0	0	0	105	0	105
397	Lexington	Washington and Lee University.	Gen. G. W. Custis Lee, LL. D.	0	14	2	16	0	16	0	0	151	0	4	0	57	0	212	0	212
398	New Market	New Market Polytechnic Institute.	W. H. Smith	2	5	0	4	3	7	12	5	15	13	0	0	0	0	27	18	45
399	Richmond	Richmond College	B. Puryear, LL. D., chairman.	0	9	1	10	0	10	0	0	164	0	0	0	0	0	164	0	164
400	Salem	Roanoke College	Julius D. Dreher, A. M., PH. D.	3	7	0	10	0	10	27	0	96	0	----	----	----	----	123	0	123
	WASHINGTON.																			
401	Colfax	Colfax College	Frank N. English	3	3	----	2	2	4	3	5	3	2	----	----	----	----	6	7	13
402	Seattle	University of Washington	Thomas M. Gatch, A. M., PH. D.	(10)		----	5	5	10	130	126	16	15	----	----	----	----	146	141	287
403	Walla Walla	Whitman College	A. J. Anderson, A. M., PH. D.	6	6	0	6	4	10	57	51	12	9	0	0	0	0	69	65	134
	WEST VIRGINIA.																			
404	Bethany	Bethany College	Archibald McLean, A. M	1	7	----	7	1	8	(20)		(140)		0	0	----	----	(164)		164
405	Flemington	West Virginia College	Rev. Thomas E. Peden	5	4	----	4	1	5	39	10	5	1	----	----	----	----	44	11	55
406	Morgantown	West Virginia University	E. M. Turner, LL. D	4	10	2	16	0	16	129	0	59	0	----	----	19	0	208	0	208

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	WISCONSIN.																		
407	Appleton	Lawrence University	C. W. Gallagher, D. D	(13)			9	4	13	56	29	49	26	0	1	0	0	99	56	155
408	Beloit	Beloit College	Edward D. Eaton, D. D., LL. D.	7	14	0	18	0	18	187	0	96	0	1	0	0	0	284	0	284
409	Madison	University of Wisconsin	Thomas Chrowder Chamberlin, PH. D., LL. D.	0	60	10	64	6	70	0	0	406	210	11	10	158	5	575	225	800
410	Milton	Milton College	William C. Whitford, D. D	(9)			0	5	4	9	50	62	38	32	0	0	0	0	88	94	177
411	Milwaukee	Marquette College	Joseph Grimmelsman, S. J. *b*	1	9	0	13	0	13	29	0	131	0	0	0	0	0	227	0	227
412	Ripon	Ripon College	Edward H. Merrell, D. D.	9	8	0	8	5	18	100	77	87	14	----	----	----	----	125	123	284
413	St. Francis	Seminary of St. Francis of Sales.	Very Rev. Joseph Rainer	0	7	5	12	0	12	0	0	140	0	0	0	110	0	250	0	250
414	Watertown	Northwestern University	August F. Ernst	2	6	----	8	0	8	101	14	60	0	0	0	0	0	161	14	175
	WYOMING.																			
415	Laramie	University of Wyoming*	John W. Hoyt, LL. D. *c*	----	----	----	5	7	12	12	32	5	4	----	----	----	----	35	45	80

* Statistics of 1888–89.
a Succeeded by Rev. James F. Eaton.
b Succeeded by R. J. Meyer, S. J.
c Succeeded by A. A. Johnson, A. M., D. D.

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TABLE 2.—*Statistics of universities and colleges for 1889-90*—PART II.

	Name.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Benefactions.
	2	21	22	23	24	25	26	27	28	29	30
	ALABAMA.										
1	Howard College	0	0	0	1,000	.....	$48-$60	.....	$150,000	0	.....
2	Southern University	0	0	0	5,000	500	50	$7,000	100,000	$25,000	$8,000
3	La Fayette College	....	....	....	200	100	20- 40	100	12,000	.....	.....
4	Spring Hill College	....	....	....	7,000	1,000	.....	3,000	300,000	.....	.....
5	Selma University	....	....	....	500	200	8	400	30,000	.....	4,000
6	University of Alabama	0	0	0	12,000	2,000	(a)	50,000	330,000	300,000	0
	ARKANSAS.										
7	Arkansas College	....	....	....	750	.....	25- 40	.....	.....	.....	.....
8	Cane Hill College	0	0	0	.....	.....	28	.....	8,000	.....	.....
9	Little Rock University	....	....	....	600	200	24, 30	700	75,000	.....	.....
10	Philander Smith College.	0	0	0	600	.....	9	*40	*20,000	.....	.....
	CALIFORNIA.										
11	University of California	1	0	0	41,330	3,000	0	300,000	1,376,068	2,035,036	0
12	Pierce Christian College	0	0	0	300	400	50	1,200	15,000	12,000	1,500
13	University of the Pacific.*	1	....	5	8,000	.....	30	10,000	150,000	60,000	.....
14	St. Vincent's College	....	....	....	2,000	.....	50	1,000	50,000	.....	.....
15	Napa College	....	....	....	600	200	50	3,500	80,000	20,000	13,000
16	California College	1	....	2	2,000	.....	60	4,000	65,000	50,000	25,000
17	St. Ignatius College	....	....	....	30,000	.....	30- 80	.....	.....	.....	.....
18	Santa Clara College	0	0	0	14,000	2,000	40	50,000	91,000	0	0
19	Pacific Methodist College.	0	....	....	2,000	.....	64	2,500	37,000	21,000	.....
20	University of Southern California.	1	....	....	1,000	.....	51- 60	.....	.....	.....	.....
21	San Joaquin Valley College.	....	....	....	1,200	300	42	500	15,000	12,500	.....
22	Hesperian College	....	....	....	500	200	50	.....	30,000	22,000	.....
	COLORADO.										
23	University of Colorado	0	0	0	8,140	.....	(b)	20,000	100,000	62,000	0
24	Colorado College	0	0	3	8,000	2,000	35	1,800	325,000	150,000	122,000
25	Presbyterian College of the Southwest.	0	0	0	700	200	36	2,000	25,000	0	0
26	University of Denver	0	0	....	1,200	100	80,100	.....	1,250,000	*142,000	.....
	CONNECTICUT.										
27	Trinity College	5	0	46	31,698	20,500	100	.....	1,000,000	556,000	3,000
28	Wesleyan University	11	1	49	38,000	.....	75	109,630	400,000	1,006,917	302,315
29	Yale University	26	6	21	200,000	.....	125	.....	.....	3,147,894	282,133
	DELAWARE.										
30	Delaware College	0	0	30	4,100	150	60	6,000	75,000	83,000	.....
	DISTRICT OF COLUMBIA.										
31	Columbian University	0	0	18	7,000	.....	80- 90	14,000	500,000	250,000	0
32	Georgetown University	....	....	....	45,000	20,000	.....	.....	.....	.....	6,355
33	Howard University	1	....	....	13,000	.....	0	10,000	500,000	180,000	9,475
34	National Deaf-Mute College.	0	....	60	3,000	.....	.....	6,000	.....	.....	500
	FLORIDA.										
35	John B. Stetson University.	0	0	0	3,000	.....	32- 60	4,000	25,000	20,000	4,468
36	Florida Conference College.	....	....	....	.....	.....	45	.....	.....	.....	2,500

* Statistics of 1888-89.
a $40 to nonresidents; free to residents of the State.
b $15 to nonresidents; free to residents of the State.

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TABLE 2.—*Statistics of universities and colleges for 1889–90.*—PART II—Cont'd.

	Name.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Benefactions.
	2	21	22	23	24	25	26	27	28	29	30
	FLORIDA—cont'd.										
37	St. John's River Conference College.	0	0	0	75	0	$24	$75	$10,000	0	$75
38	Rollins College	0	0	0	2,000	300	25- 50	4,000	40,000	.....	13,371
	GEORGIA.										
39	University of Georgia	1	0	0	14,000	.....	0	75,000	168,000	$445,202	225
40	Atlanta University	0	0	0	7,000	.....	1- 2	5,000	160,000	30,000	20,524
41	Bowdon College	0	....	....	300	50	16	1,000	5,000	.....	300
42	Gainesville College	0	0	0	500	150	30	800	15,000	0	0
43	Mercer University	7	0	....	10,000	2,000	0	3,000	150,000	180,000	15,000
44	Emory College	3	....	....	7,000	.....	60	10,000	100,000	120,000	15,000
45	Clark University	....	....	....	2,000	500	9	2,500	250,000	.....	.....
	ILLINOIS.										
46	Hedding College	....	....	....	2,000	400	38	.....	50,000	.....	2,000
47	Illinois Wesleyan University.	0	0	0	30,000	.....	39	.....	120,000	75,000	12,500
48	St. Viateur's College	....	....	....	1,500	200	.....	2,500	150,000	.....	3,300
49	Blackburn University	....	....	....	1,800	.....	35	30,000	50,000	80,000	500
50	Carthage College	1	0	0	3,000	500	32	500	34,000	18,000	1,500
51	University of Illinois	0	0	0	19,000	3,000	a22	60,000	400,000	450,000	0
52	St. Ignatius College	0	0	0	15,000	.....	40- 60	.....	300,000	0	0
53	Evangelical Prosemi-nary.	0	0	4	300	75	150	800	50,000	0	2,620
54	Eureka College	1	....	....	2,000	1,000	39	6,000	65,000	60,000	18,000
55	Northwestern University.	3	0	368	23,000	.....	27- 95	75,000	465,000	1,497,012	1,000
56	Ewing College	0	0	0	2,500	.....	30	.....	6,000	0	.....
57	Northern Illinois College.	....	....	....	1,207	150	32	.....	150,000	8,000	.....
58	German-English College	0	0	0	700	200	28	2,000	10,000	10,000	3,200
59	Knox College	1	0	0	7,000	.....	45	8,000	130,000	254,086	60,000
60	Lombard University	3	0	15	5,600	1,000	15- 33	6,000	40,000	200,000	45,000
61	Illinois College	....	....	11	15,000	2,000	36, 45	5,000	125,000	180,000	40,000
62	Lake Forest University	3	0	15	10,000	500	60	5,000	250,000	600,000	40,000
63	McKendree College	0	0	0	4,000	1,000	30	10,000	60,000	24,000	0
64	Lincoln University	0	0	0	2,500	500	27	5,000	30,000	39,471	0
65	Monmouth College	....	....	....	14,000	500	40	17,000	57,000	123,000	8,000
66	Northwestern College	....	....	....	2,000	600	12- 18	7,000	60,000	100,000	6,000
67	Chaddock College	0	0	0	2,000	500	40	1,000	200,000	8,000	500
68	St. Francis Solanus College.	....	....	....	2,908	358	30	3,500	40,000	.....	1,000
69	Augustana College	0	0	0	8,600	4,400	36	13,000	100,000	0	10,158
70	St. Joseph's Diocesan College.	0	0	0	3,000	.....	20	4,000	80,000	0	.....
71	Shurtleff College	0	....	30	8,000	.....	30- 51	2,000	53,000	80,000	1,000
72	Westfield College	....	....	20	1,200	.....	27	2,500	25,000	.....	.....
73	Wheaton College	b3	0	2	2,500	.....	30	5,000	87,825	43,000	7,000
	INDIANA.										
74	Indiana University	0	0	90	12,000	5,000	18	70,000	170,000	500,000	2,000
75	Wabash College	4	0	38	30,000	.....	39	60,000	165,000	286,000	100,000
76	Concordia College	....	....	....	....	....	40	.....	.....	.....	.....
77	Franklin College	1	....	....	6,000	500	24	8,500	65,000	116,000	10,005
78	De Pauw University	....	....	....	10,000	3,000	0	20,000	300,000	460,000	14,000
79	Hanover College	....	....	....	7,000	.....	0	.....	.....	.....	.....
80	Hartsville College	2	0	....	1,236	.....	24	2,800	20,000	14,129	11,000
81	Butler University	4	0	0	2,500	1,000	28	10,000	75,000	250,000	37,000
82	Union Christian College.	6	....	....	1,200	280	8	5,000	40,000	50,000	4,000
83	Moore's Hill College	....	....	....	1,484	1,718	30	.....	.....	.....	.....
84	University of Notre Dame.	....	....	....	32,500	2,500	50	25,000	1,000,000	.....	0
85	Earlham College	0	0	0	5,000	2,000	65	15,000	150,000	75,000	.....
86	Ridgeville College	....	....	30	600	500	40	1,000	40,000	20,000	.....
87	St. Meinrad's College	....	....	....	12,000	5,000	.....	.....	.....	.....	.....

a Incidental fee. *b* Partly.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART II—Cont'd.

	Name.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Benefactions.
	2	21	22	23	24	25	26	27	28	29	30
	IOWA.										
88	Coe College	----	----	2	2,000	300	$37	$3,000	$80,000	$85,000	$2,000
89	Amity College	----	----	----	2,000	500	24- 30	500	30,000	40,000	2,000
90	Griswold College	4	0	1	8,000	4,000	----	----	200,000	80,000	1,000
91	Norwegian Luther College.	0	0	0	5,050	----	10- 20	----	----	6,227	1,000
92	Des Moines College	----	----	----	2,000	100	30	3,000	70,000	----	25,000
93	Drake University	3	0	8	2,000	1,000	36	6,000	75,000	125,000	50,000
94	Parsons College	4	----	9	2,000	----	38	1,500	65,000	50,000	75,000
95	Upper Iowa University	a2	----	----	4,000	1,000	10	1,500	49,000	10,000	500
96	Iowa College	----	0	34	14,000	----	30, 35	30,000	250,000	200,000	45,000
97	Lenox College	0	0	3	1,300	600	30	1,275	15,000	13,000	1,700
98	Simpson College	0	0	0	1,950	1,765	30- 35	3,750	80,000	30,000	12,000
99	State University of Iowa.	0	0	0	23,656	----	25- 50	20,000	250,000	232,497	100
100	German College	----	----	----	400	240	21- 30	----	15,000	22,000	----
101	Iowa Wesleyan University.	5	0	0	2,500	1,000	36	6,500	75,000	60,000	2,500
102	Cornell College	4	0	100	9,000	2,000	18	15,000	160,000	65,000	10,000
103	Oskaloosa College	0	0	0	4,000	----	30	10,000	40,000	13,000	5,000
104	Penn College	----	----	----	2,500	500	34	1,500	50,000	35,000	25,000
105	Central University of Iowa.	----	----	----	1,500	----	18	1,200	10,000	20,000	----
106	Tabor College	----	----	----	5,000	500	30	15,000	50,000	85,000	62,000
107	Western College	1	----	----	3,000	----	28	3,000	85,000	60,000	50,000
108	Wartburg College	0	0	0	1,300	200	20- 30	3,500	15,000	----	600
	KANSAS.										
109	Midland College	1	0	0	50	----	30- 40	1,000	50,000	24,000	25,000
110	St. Benedict's College	0	0	1	8,750	2,000	40	----	----	0	0
111	Baker University	----	----	----	3,400	----	25	*2,000	*100,000	*10,000	----
112	College of Emporia	0	0	0	4,000	----	10	5,000	80,000	17,500	5,000
113	Highland University	2	0	0	4,500	500	25	5,000	16,050	40,000	12,000
114	Campbell University	0	0	0	400	----	40	1,200	40,000	0	0
115	University of Kansas	0	0	0	12,541	----	0	150,000	350,000	165,000	1,500
116	Lane University*	----	----	----	1,000	----	24	----	70,000	15,000	----
117	Bethany College	0	0	1	4,000	500	30	5,000	110,000	0	21,195
118	Ottawa University	0	0	0	1,800	721	30	1,200	39,000	48,000	5,000
119	St. Mary's College	0	0	0	8,500	1,100	30	800	81,000	0	0
120	Kansas Wesleyan University.	----	----	----	1,500	200	30	100	50,000	30,000	3,000
121	Cooper Memorial College.	0	0	0	300	50	30	----	25,000	14,000	6,000
122	Washburn College	----	----	----	6,000	3,000	33	2,000	410,000	100,000	25,000
123	Garfield University	0	0	0	1,000	500	38	2,000	350,000	0	0
	KENTUCKY.										
124	Berea College	0	0	73	4,000	450	10- 13	7,000	105,000	80,000	4,500
125	Ogden College	1	0	----	2,000	250	(b)	3,000	40,000	140,000	0
126	Centre College of Kentucky.	1	----	29	8,000	----	50	10,000	100,000	225,000	30,000
127	Eminence College	----	----	----	2,000	----	40, 50	4,000	25,000	----	----
128	Georgetown College	2	----	----	8,500	----	50	10,000	75,000	200,000	1,500
129	South Kentucky College.	0	0	0	1,000	----	50	1,200	40,000	0	0
130	Garrard College	0	0	0	100	20	30- 60	100	10,000	0	0
131	Kentucky University	0	0	0	12,000	----	----	26,750	133,250	207,000	----
132	Murray Male and Female Institute.*	----	----	----	100	----	15- 40	50	16,000	----	----
133	Central University of Kentucky.	5	0	70	6,000	1,000	60	8,000	125,000	200,000	102,000
134	Bethel College	3	0	15	3,000	500	55	3,000	50,000	90,000	0
135	St. Mary's College	0	0	0	2,000	1,000	40	300	30,000	0	0
136	West Kentucky Classical and Normal College.	0	0	15	300	0	40	100	8,000	0	0
137	Kentucky Wesleyan College.	----	----	----	2,000	----	40	1,000	22,500	35,000	----

*Statistics of 1888-89. *a* Partly. *b* $30 to nonresidents; free to residents.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART II—Cont'd.

	Name.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Benefactions.
	2	21	22	23	24	25	26	27	28	29	30
	LOUISIANA.										
138	Arcadia Male and Female College.	0	0	0	25	75	$20- 50	$50	$3,000	0	0
139	Louisiana State University and Agricultural and Mechanical College.	0	0	0	19,000	.....	0	6,000	200,000	$318,313	0
140	Jefferson College*	....	....	....	4,000	.....	.....	.....	.....	.....	.....
141	St. Charles College	....	....	....	10,000	.....	.....	.....	.....	.....	0
142	Centenary College of Louisiana.	0	0	....	5,000	1,000	40, 60	10,000	100,000	50,000	$15,000
143	Keachie College	0	0	0	150	200	25- 50	1,000	25,000	0	4,100
144	College of the Immaculate Conception.	....	....	....	10,000	1,500	60	10,000	150,000	.....	.....
145	Leland University	....	....	....	1,000	100	8	250	150,000	95,000	0
146	New Orleans University	....	....	....	4,000	1,000	8	200	120,000	.....	39,000
147	Southern University	0	0	0	201	200	0	1,000	33,533	0	0
148	Straight University	0	0	52	2,000	.....	8	1,450	60,000	3,000	4,236
149	Tulane University of Louisiana.	....	....	121	42,000	4,000	80	60,000	200,000	1,150,000	80,000
	MAINE.										
150	Bowdoin College	....	0	50	41,814	8,000	75	60,000	250,000	430,000	10,000
151	Bates College	2	....	28	10,300	.....	36	29,000	150,000	300,000	.....
152	Colby University	2	....	....	24,500	12,000	60	.....	a250,000	515,000	21,150
	MARYLAND.										
153	St. John's College	0	0	42	6,500	.....	40- 75	10,000	200,000	.....	500
154	Johns Hopkins University.	3	21	67	35,000	.....	125	170,000	702,000	3,000,000	121,000
155	Loyola College	....	....	6	20,000	3,000	75	2,500	150,000	.....	2,329
156	Morgan College	....	....	12	2,500	400	4- 12	50	45,000	5,000	.....
157	Washington College	0	0	0	2,500	.....	30, 40	.....	.....	30,000	.....
158	Rock Hill College	....	....	....	4,800	2,000	60	1,000	42,900	.....	.....
159	St. Charles College	0	0	....	10,400	.....	.....	.....	.....	.....	0
160	Mount St. Mary's College.	0	0	0	10,000	1,000	.....	15,000	150,000	.....	0
161	New Windsor College and Windsor Female College.	....	....	....	3,000	500	.....	3,000	60,000	.....	.....
162	Western Maryland College.	0	0	26	1,000	.....	45	2,500	100,000	0	.....
	MASSACHUSETTS.										
163	Amherst College	9	3	190	53,000	.....	110	150,000	370,000	1,000,000	50,000
164	Boston College*	0	0	0	12,000	.....	60	5,000	400,000	0	.....
165	Boston University	....	2	119	21,000	.....	100	15,000	338,000	1,075,000	90,337
166	Harvard University	25	24	162	280,000	100,000	150	750,000	3,000,000	7,030,031	439,508
167	French Protestant College.	0	....	26	100	50	100	.....	25,000	1,500	14,300
168	Tufts College	4	....	39	28,000	.....	100	*50,000	*500,000	*773,552	130,000
169	Williams College	10	....	80	27,000	5,000	105	40,000	400,000	760,000	76,168
170	Clark University	....	20	10	10,000	.....	200	.....	.....	.....	5,500
171	College of the Holy Cross.	0	0	1	16,000	3,000	60	10,000	.....	1,000	2,000
	MICHIGAN.										
172	Adrian College	12	0	0	5,000	500	28	25,000	275,000	60,000	17,800
173	Albion College	6	....	1	7,383	2,000	0	30,000	100,000	210,000	32,000
174	Alma College	6	....	....	8,000	8,000	18	.....	40,000	80,000	.....
175	University of Michigan.	0	1	0	74,500	14,907	20- 35	575,000	625,000	550,000	.....
176	Battle Creek College	0	0	0	1,500	100	33	2,308	90,065	0	2,123
177	Benzonia College	....	....	....	700	200	15	100	10,000	40,000	3,000
178	Detroit College	....	....	....	4,000	500	40	2,500	160,000	.....	33,000

* Statistics of 1888-89.

a Includes apparatus and libraries.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART II—Cont'd.

	Name.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Indebtedness.
	2	21	22	23	24	25	26	27	28	29	30
	MICHIGAN—cont'd.										
179	Hillsdale College	10	0	....	8,000	2,000	.....	.....	$150,000	$160,000	$1 [illegible]
180	Hope College	0	0	3	7,000	5,000	$15	85,000	45,000	128,000	54,50
181	Kalamazoo College	a5	0	0	5,000	.....	25	.....	60,000	110,000	4,00
182	Olivet College	7	0	0	16,827	16,000	24-30	35,619	133,800	170,062	37,57
	MINNESOTA.										
183	St. John's University	0	0	0	10,000	1,000	30	12,000	300,000	.....	
184	Hamline University	3	....	....	.....	.....	30, 36	7,000	185,000	77,093	.....
185	Augsburg Seminary	....	....	....	.....	.....	.....	.....	.....	.....	.....
186	University of Minnesota.	....	3	....	25,000	.....	5	150,000	1,250,000	800,000	.....
187	Dr. Martin Luther College.	....	....	....	200	.....	34	600	30,000	.....	.....
188	Carleton College	1	0	0	9,598	.....	26	27,538	195,824	311,783	33,38
189	St. Olaf College	0	0	0	641	100	0	1,500	27,000	0	.....
190	Macalester College	3	....	7	4,000	.....	45	20,000	400,000	76,000	40,00
191	Parker College	2	....	50	400	.....	18	500	50,000	60,000	48,00
	MISSISSIPPI.										
192	Mississippi College	0	....	....	5,000	500	30-60	6,000	50,000	20,000	23,000
193	Cooper Normal College	....	....	....	4,000	1,000	40	250	12,000	0	0
194	Harperville College	0	0	2	700	1,500	50	1,500	3,500	0	0
195	Rust University	....	....	....	1,100	.....	12	800	40,000	.....	.....
196	Kavanaugh College	0	0	0	1,200	400	40	0	4,000	0	2,000
197	University of Mississippi.	0	1	5	13,000	1,000	0	50,000	300,000	554,000	0
	MISSOURI.										
198	Southwest Baptist College.	0	0	0	700	1,200	30	250	25,000	0	.....
199	Pike College	0	0	0	350	.....	21-36	500	5,000	.....	.....
200	Christian University	a1	....	....	800	1,000	40	1,000	75,000	8,000	000
201	St. Vincent's College	....	....	....	12,000	3,000	.....	40,000	100,000	45,000	.....
202	Carthage Collegiate Institute.	....	....	12	500	.....	40	500	40,000	0	5,00
203	University of the State of Missouri.	....	....	....	22,647	17,203	20	.....	534,000	540,000	.....
204	Grand River College*	0	....	....	600	.....	36	100	15,000	1,700	.....
205	Central College	2	2	2	4,500	.....	40, 50	.....	85,000	110,000	10,000
206	Westminster College*	6	....	....	6,000	.....	40	3,000	35,000	78,000	.....
207	Lewis College	....	....	....	4,000	.....	30, 38	3,500	100,000	.....	2
208	Pritchett School Institute.	2	0	15	.....	.....	15-45	1,200	30,000	56,000	.....
209	Harris College	0	0	110	435	420	40-60	800	7,500	.....	150
210	Western College	0	0	0	500	300	30	700	6,000	.....	.....
211	La Grange College	0	0	0	2,000	500	40	800	30,000	8,000	5,000
212	William Jewell College	0	0	0	4,000	.....	40	.....	50,000	175,000	1,000
213	Missouri Valley College	....	....	....	100	.....	25	200	110,000	109,000	5,000
214	Morrisville College	....	....	....	600	200	25-40	1,200	10,000	0	.....
215	Scarritt Collegiate Institute.	....	....	....	800	50	22-42	600	25,000	.....	.....
216	Park College	....	....	7	2,000	.....	15-30	.....	125,000	2,800	.....
217	College of the Christian Brothers.	....	....	....	.....	.....	.....	.....	.....	.....	.....
218	St. Louis University	0	0	5	40,000	.....	60	.....	.....	0	0
219	Washington University	1	....	30	8,000	1,000	150	150,000	630,000	700,000	.....
220	Shelbina Collegiate Institute.	0	....	....	50	0	36	200	10,000	0	0
221	Drury College	2	0	16	20,000	22,000	30, 48	25,000	225,000	77,000	15,700
222	Tarkio College	....	....	....	500	100	30	1,000	42,500	24,707	3,192
223	Avalon College	....	....	....	1,000	.....	30	1,000	10,000	10,000	28,000
224	Central Wesleyan College.	3	0	5	3,600	100	22-37	5,000	55,000	30,000	.....

* Statistics of 1888-89. *a* Partly.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART II—Cont'd.

	Name.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Benefactions.
	2	21	22	23	24	25	26	27	28	29	30
	MONTANA.										
225	College of Montana	0	0	1	1,200	100	$50	$1,500	$113,000	$3,000	$25,000
	NEBRASKA.										
226	Bellevue College	a 1	....	30	500	300	30	1,000	100,000	4,000	500
227	Doane College	3	0	7	4,000	4,000	17–24	10,500	79,000	43,140	19,869
228	Cotner University	1	0	....	....	....	27	....	100,000	25,000	35,000
229	University of Nebraska	0	0	0	11,412	2,000	0	52,500	625,500	952,560	0
230	Gates College	1	0	3	4,092	....	16–22	3,000	23,500	12,000	7,720
231	Creighton College	....	....	....	....	....	0	....	....	150,000	....
232	Nebraska Wesleyan University.	0	0	0	1,200	200	30	4,000	115,000	50,000	....
	NEVADA.										
233	University of Nevada	....	....	....	3,000	480	....	1,000	150,000	91,000	....
	NEW HAMPSHIRE.										
234	Dartmouth College	b 10	....	....	70,000	....	....	....	....	....	....
	NEW JERSEY.										
235	St. Benedict's College	0	0	0	500	....	60	1,200	*25,000	....	0
236	Rutgers College	....	....	....	25,762	4,000	75	*50,000	*400,000	....	....
237	College of New Jersey	10	12	78	65,000	....	100	....	....	....	....
238	College of the Sacred Heart.	....	....	....	2,000	....	....	....	*70,000	....	....
	NEW MEXICO.										
239	Albuquerque College	0	0	0	0	0	20	0	5,500	0	1,500
	NEW YORK.										
240	Alfred University	5	....	....	7,713	2,200	36	31,000	110,000	165,000	2,500
241	St. Bonaventure's College.	....	....	12	6,272	497	....	35,100	161,000	....	....
242	St. Stephen's College	0	0	39	8,000	....	0	10,000	162,000	92,000	31,000
243	Polytechnic Institute of Brooklyn.	0	0	0	300	....	140	11,500	234,309	32,875	130,000
244	St. Francis College	0	0	3	4,000	1,000	....	12,900	152,500	9,500	6,000
245	St. John's College	0	....	....	3,000	1,000	60	2,000	2,000	....	....
246	Canisius College	0	0	0	14,000	....	40	160,000	223,500	0	....
247	St. Lawrence University.	5	0	72	9,748	3,000	45	17,000	100,000	281,640	25,000
248	Hamilton College	10	2	24	35,000	....	75	....	245,000	317,433	33,310
249	St. John's College	....	....	....	....	....	....	....	....	....	1,000
250	Hobart College	....	0	27	23,961	2,131	....	54,250	99,000	289,954	0
251	Colgate University	10	....	64	19,045	....	45	66,177	262,500	539,905	152,018
252	Cornell University	2	8	33	108,138	30,000	75	466,611	1,033,965	4,854,088	500
253	College of St. Francis Xavier.	0	0	20	10,000	200	60	24,750	500,000	0	6,945
254	College of the City of New York.	0	0	0	27,000	1,600	0	86,000	230,000	41,250	0
255	Columbia College	1	24	106	115,700	....	150–200	585,290	1,000,000	8,131,440	36,950
256	Manhattan College	0	0	1	7,518	256	50–100	25,505	380,000	0	185
257	University of the City of New York.	0	2	20	14,000	....	0	75,000	500,000	550,000	103,500
258	Niagara University	0	0	4	6,000	0	....	14,000	300,000	....	....
259	University of Rochester	c5	2	26	25,610	....	75	101,350	405,600	491,473	63,354
260	Union University	....	....	....	26,503	....	90	d122,300	d667,000	....	....
261	Syracuse University	4	0	25	32,500	1,200	30–100	105,000	891,000	565,000	90,000

* Statistics of 1888-89.
a Partly.
b Three of these are but partly endowed.
c Four of these are but partly endowed.
d From report of regents of the University of the State of New York.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART II—Cont'd.

	Name.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Benefactions.
	2	21	22	23	24	25	26	27	28	29	30
	NORTH CAROLINA.										
262	University of North Carolina	....	....	11	34,000	3,000	$80	$67,000	$220,000	$10,000	.....
263	Biddle University	0	0	....	4,200	.....	0	.....	80,000	.....	[illegible]
264	Davidson College	....	....	7	9,000	.....	60	10,000	100,000	108,000	2,00[illegible]
265	Guilford College	....	....	....	2,000	1,000	54	2,000	50,000	30,000	10,00[illegible]
266	North Carolina College	0	0	0	1,000	1,000	20–40	2,000	2,500	1,500	[illegible]
267	Shaw University	1	....	....	.....	5,000	8–60	10,000	160,000	35,000	25,00[illegible]
268	Rutherford College	0	0	0	2,000	1,000	20–40	2,000	25,000	0	[illegible]
269	Livingstone College	....	....	....	3,000	500	.....	2,000	100,000	.....	.....
270	Trinity College	1	2	2	8,000	1,000	50	10,000	30,000	18,000	120,00[illegible]
271	Wake Forest College	....	....	....	10,300	3,000	60	25,000	60,000	155,300	1,50[illegible]
	NORTH DAKOTA.										
272	Fargo College	0	0	1	500	1,000	30	.....	80,000	25,000	30,07[illegible]
273	University of North Dakota	0	0	0	3,000	1,000	0	10,000	100,000	0	[illegible]
	OHIO.										
274	Buchtel College	5	0	50	5,100	.....	40	21,323	174,449	480,845	22,07[illegible]
275	Mount Union College	....	....	....	3,200	.....	30	.....	200,000	.....	.....
276	Ashland University	0	....	....	500	200	30	800	80,000	0	5,00[illegible]
277	Ohio University	....	....	....	8,000	500	27	25,000	100,000	125,000	.....
278	Baldwin University	0	0	....	4,000	.....	24	5,000	72,200	136,000	12,00[illegible]
279	German Wallace College	5	....	....	2,000	.....	.....	3,300	55,000	66,297	.....
280	St. Joseph's College	....	....	....	13,000	2,600	60	6,000	50,000	.....	.....
281	St. Xavier College	0	0	0	16,000	.....	60	.....	.....	.....	.....
282	University of Cincinnati	0	0	0	3,550	.....	0	30,000	150,000	619,000	0
283	Adelbert College of Western Reserve University	5	....	60	21,000	4,000	30	42,000	276,000	640,000	19,750
284	Calvin College	....	....	....	2,000	.....	30	.....	10,000	.....	2,000
285	Belmont College	1	0	0	800	200	33	1,000	60,000	[illegible]30,000	0
286	Capital University	0	....	....	4,000	.....	40	.....	80,000	.....	0
287	Ohio State University	0	0	88	9,313	.....	0	75,000	1,425,000	539,470	0
288	Ohio Wesleyan University	6	....	....	14,386	4,000	5	37,930	221,261	233,634	54,000
289	Findlay College	0	0	12	1,250	.....	30	.....	103,000	45,316	24,28[illegible]
290	Kenyon College	....	....	....	20,000	.....	75	10,100	296,725	232,000	5,00[illegible]
291	Twin Valley College	....	....	....	427	.....	32	1,000	30,000	.....	.....
292	Denison University	1	....	20	16,000	12,000	34	30,000	100,000	325,000	.....
293	Hillsboro College	1	....	....	1,500	200	30–45	.....	35,000	6,000	0
294	Hiram College	1	0	0	5,300	0	30	8,000	45,000	60,000	12,00[illegible]
295	Marietta College	....	....	38	42,000	.....	45	.....	.....	.....	25,00[illegible]
296	Franklin College	....	0	0	2,000	.....	40	2,000	12,000	0	250
297	Muskingum College	....	....	....	.....	.....	30	.....	18,000	35,000	.....
298	Oberlin College	0	2	103	31,000	.....	30	100,000	400,000	500,000	99,00[illegible]
299	Miami University	0	0	20	9,889	2,500	45	15,000	120,000	150,000	15,55[illegible]
300	Richmond College	0	0	0	3,000	1,000	40	3,000	41,000	0	0
301	Rio Grande College	0	0	0	500	400	28	600	35,000	65,000	0
302	Scio College*	....	....	....	1,000	.....	30	400	40,000	.....	.....
303	Wittenberg College	....	....	....	10,000	.....	45	20,000	300,000	175,000	8,000
304	Heidelberg University	2	0	....	.....	.....	24	.....	85,000	91,000	20,00[illegible]
305	Urbana University	0	0	6	5,000	1,000	30	6,500	17,500	58,000	1,05[illegible]
306	Otterbein University	5	0	0	4,500	1,000	30	5,000	52,000	78,500	8,50[illegible]
307	Wilberforce University	0	0	2	4,000	1,000	14–17	6,000	60,000	16,000	70[illegible]
308	Wilmington College	....	1	....	2,000	300	39	5,000	40,000	30,000	2,30[illegible]
309	University of Wooster	6	0	42	11,500	3,000	15–45	14,000	120,000	205,000	4,000
310	Antioch College	....	....	....	7,000	300	37	5,000	100,000	100,000	.....
	OREGON.										
311	Corvallis College	....	....	....	1,000	500	45	.....	10,000	.....	.....
312	University of Oregon	0	0	0	3,300	3,000	*a* 10	5,000	100,000	149,000	4,10[illegible]
313	Pacific University	....	....	....	6,000	.....	30–45	.....	.....	.....	.....
314	McMinnville College	1	0	28	1,000	200	33–42	1,600	30,000	29,000	4,000
315	Philomath College	0	0	0	1,000	900	30	600	12,000	9,000	0
316	Willamette University	2	....	16	4,000	100	26–52	6,000	150,000	50,000	5,000

* Statistics of 1888–89.

a Incidental fee.

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TABLE 2.—*Statistics of universities and colleges for 1889–90.*—PART II.—Cont'd.

	Name.	Number of endowed professorships.	Number of fellowships.	Library. Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Benefactions.
	2	21	22	23	24	25	26	27	28	29	30
	PENNSYLVANIA.										
317	Western University of Pennsylvania.	a2	0	0	.....	.....	$100	.....	$250,000	$200,000	$1,000
318	Muhlenberg College	4	0	28	8,000	1,000	50	$10,000	80,000	132,000	4,568
319	Lebanon Valley College.	1	0	0	4,500	750	40	2,000	50,000	15,000	14,000
320	St. Vincent College	0	0	0	18,000	.....	.....	.....	.....	.....	0
321	Geneva College	0	.....	.....	1,200	300	39	9,000	75,000	130,000	.....
322	Dickinson College	1	0	0	33,000	.....	(b)	25,000	256,000	286,510	19,025
323	Pennsylvania Military Academy.	.....	.....	.....	800	.....	.....	5,000	250,000	.....	.....
324	Ursinus College	.....	.....	.....	3,400	50	48	.....	*$1,000	.....	30,000
325	Lafayette College	5	0	0	22,000	2,000	45–75	50,000	600,000	272,302	.....
326	Pennsylvania College	6	.....	39	22,000	.....	39,50	10,000	270,000	137,000	53,000
327	Thiel College	2	.....	39	6,000	.....	40	8,000	60,000	60,000	7,000
328	Grove City College	.....	.....	.....	2,000	.....	36	5,000	55,000	.....	.....
329	Haverford College	12	4	20	25,000	2,500	150	80,000	400,000	215,000	14,000
330	Franklin and Marshall College.	1	.....	125	15,385	.....	39	50,000	120,000	170,000	7,906
331	Bucknell University	1	.....	22	9,250	2,000	50	75,000	300,000	350,000	66,666
332	Lincoln University	9	0	30	13,000	2,000	25	31,200	185,000	237,450	56,508
333	St. Francis College	0	0	0	2,000	.....	.....	2,500	45,000	0	0
334	Allegheny College	6	0	15	12,000	3,000	36	15,000	120,000	150,000	.....
335	Central Pennsylvania College.	0	0	0	3,300	300	32–48	5,000	22,000	150	300
336	Westminster College	.....	.....	.....	.....	.....	24	.....	.....	.....	.....
337	La Salle College	0	0	0	.....	800	80	6,000	100,000	0	0
338	St. Joseph's College	0	0	0	5,200	.....	0	.....	.....	0	.....
339	University of Pennsylvania.	6	8	74	20,000	75,000	100–200	185,000	1,680,000	1,674,929	240,000
340	Holy Ghost College	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
341	Swarthmore College	4	.....	.....	12,851	.....	.....	25,000	500,000	400,000	.....
342	Villanova College	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
343	Washington and Jefferson College.	4	0	6	10,500	.....	24	20,000	150,000	255,900	8,352
	RHODE ISLAND.										
344	Brown University	.....	.....	100	68,000	20,000	100	.....	*625,000	*980,836	.....
	SOUTH CAROLINA.										
345	College of Charleston	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
346	Presbyterian College of South Carolina.	.....	.....	.....	.....	.....	40	.....	10,000	.....	.....
347	Allen University	.....	.....	.....	300	100	8	.....	20,000	.....	.....
348	University of South Carolina.	0	1	5	30,000	2,500	40	25,000	250,000	.....	.....
349	Erskine College	.....	.....	.....	1,500	500	0	3,000	30,000	78,000	.....
350	Furman University	.....	.....	.....	2,600	500	40–60	.....	60,000	50,000	.....
351	Newberry College	.....	.....	4	6,000	2,000	50	10,000	30,000	22,000	6,100
352	Claflin University	.....	.....	.....	1,400	500	3	1,000	100,000	.....	115
353	Wofford College	.....	.....	.....	6,000	.....	40	.....	100,000	53,000	.....
	SOUTH DAKOTA.										
354	Pierre University	0	0	5	1,200	.....	24–36	1,670	30,000	0	950
355	Dakota University	.....	.....	.....	2,000	.....	8–9	3,000	100,000	.....	6,000
356	Redfield College	.....	0	3	600	.....	30	50	25,000	0	6,500
357	University of South Dakota.	0	0	0	2,100	.....	3	5,000	125,000	0	0
358	Yankton College	0	0	3	3,900	200	30	20,000	75,000	11,000	20,859
	TENNESSEE.										
359	King College	a2	0	0	600	.....	36	.....	25,000	20,000	8,000
360	U. S. Grant University	0	0	0	200	100	21	600	250,000	0	500

* Statistics of 1888–89. *a* Partly. *b* In college, $6.25; preparatory, $81.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART II—Cont'd.

	Name.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Benefactions.
	2	21	22	23	24	25	26	27	28	29	30
	TENNESSEE—cont'd.										
361	Southwestern Presbyterian University.	2	0	3	6,000	.....	$50	$31,500	$50,000	$180,000	[illegible]
362	Hiwassee College	.....	.....	.....	.....	.....	25-40	.....	.....	.....	[illegible]
363	Southwestern Baptist University.	.....	.....	.....	6,000	450	56	8,000	50,000	62,000	[illegible]
364	Knoxville College	0	0	0	2,400	200	5	50	60,000	0	.....
365	University of Tennessee	.....	.....	286	7,000	3,000	50	13,000	500,000	426,000	.....
366	Cumberland University	a7	0	0	7,000	.....	50	.....	40,000	60,000	.....
367	Bethel College	0	0	0	1,600	500	12-50	1,500	10,000	0	0
368	Maryville College	0	0	0	10,000	.....	10	10,000	60,000	112,000	13,000
369	Christian Brothers College.	.....	.....	.....	3,500	1,500	.....	.....	.....	.....	.....
370	Milligan College	0	0	0	400	500	36	700	15,000	0	1,000
371	Carson and Newman College.	0	0	0	500	100	25-40	1,000	15,000	20,000	0
372	Central Tennessee College.	0	0	4	2,300	450	9	2,000	80,000	10,000	2,285
373	Fisk University	0	0	7	4,611	1,500	13	6,000	300,000	6,000	.....
374	Roger Williams University.	0	0	0	3,840	.....	8	5,000	100,000	1,400	.....
375	Vanderbilt University	.....	10	25	16,000	4,000	50	125,000	450,000	900,000	.....
376	University of the South	.....	.....	5	24,000	3,000	100	25,000	125,000	50,000	60,000
377	Burritt College	0	0	0	1,280	354	40	4,000	25,000	0	250
378	Greeneville and Tusculum College.	0	0	0	7,000	500	20	200	20,000	0	0
	TEXAS.										
379	University of Texas	0	0	0	6,300	.....	0	50,000	200,000	642,000	16,000
380	Fort Worth University	.....	.....	.....	1,000	200	27-45	1,500	100,000	.....	110
381	St. Mary's University	.....	.....	.....	2,500	100	40	500	50,000	.....	.....
382	Southwestern University.	0	0	.....	1,200	200	40, 60	2,000	140,000	.....	.....
383	Hope Institute	.....	.....	.....	150	.....	24-32	.....	5,000	.....	.....
384	Wiley University	0	0	0	1,400	1,500	10	1,000	2,800	0	35
385	Austin College	2	0	.....	4,000	2,000	56	500	.....	20,000	4,000
386	Trinity University	2	.....	15	700	.....	25-50	3,000	50,000	.....	5,000
387	Add-Ran Christian University.	.....	.....	.....	.....	.....	45	.....	.....	.....	.....
388	Baylor University	.....	0	0	2,075	800	3-5	1,200	250,000	0	.....
389	Paul Quinn College	0	0	0	612	314	12	1,381	35,000	0	6,777
	UTAH.										
390	University of Utah	.....	.....	.....	8,500	2,700	40	25,000	240,000	.....	.....
	VERMONT.										
391	University of Vermont and State Agricultural College.	b3	0	62	40,000	15,000	60	100,000	275,000	365,000	121,000
392	Middlebury College	2	0	81	16,000	1,200	60	25,000	100,000	164,436	50
	VIRGINIA.										
393	Randolph-Macon College.	5	.....	.....	10,000	.....	75	5,000	175,000	120,000	50,000
394	University of Virginia	c7	0	17	45,000	6,000	87	263,300	771,600	290,600	.....
395	Emory and Henry College.	.....	.....	.....	8,000	1,000	50	8,000	100,000	25,000	4,000
396	Hampden-Sidney College.	.....	.....	2	4,000	.....	60	1,000	100,000	135,000	20,000
397	Washington and Lee University.	7	1	15	[illegible],500	.....	50	31,000	172,000	610,448	15,000
398	New Market Polytechnic Institute.	.....	.....	.....	400	.....	50	.....	2,500	.....	.....

a Partly. *b* Two of these are but partly endowed.
c Four of these are but partly endowed.

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TABLE 2.—*Statistics of universities and colleges for 1889-90.*—PART II—Cont'd.

	Name.	Number of endowed professorships.	Number of fellowships.	Number of scholarships.	Library. Number of bound volumes.	Library. Number of pamphlets.	Annual charge for tuition.	Value of scientific apparatus and libraries.	Value of grounds and buildings.	Amount of permanent productive funds.	Benefactions.
	2	21	22	23	24	25	26	27	28	29	30
	VIRGINIA—cont'd.										
399	Richmond College	2	0	23	9,000	.....	$70–80	$2,500	$300,000	$150,000	$25,000
400	Roanoke College	0	....	10	17,000	.....	50	30,000	60,000	60,000	40,000
	WASHINGTON.										
401	Colfax College	0	0	0	150	250	24–45	250	17,000	0	4,000
402	University of Washington.	....	....	....	3,000	600	24	600	525,000	.....	.....
403	Whitman College	0	....	8	3,500	2,030	39,48	3,000	36,000	12,000	800
	WEST VIRGINIA.										
404	Bethany College	3	....	....	3,000	4,000	30	5,000	75,000	80,000	15,000
405	West Virginia College	0	0	0	200	25	24,28	200	10,000	150	100
406	West Virginia University.	....	....	....	6,000	1,100	0	15,000	150,000	108,000	.....
	WISCONSIN.										
407	Lawrence University	1	0	0	12,000	.....	27,36	30,163	84,000	81,283	.....
408	Beloit College	7	0	67	16,000	.....	32–43	.....	150,000	375,254	214,050
409	University of Wisconsin.	1	9	11	a33,000	.....	0	150,000	1,650,000	251,236	20,000
410	Milton College	0	0	0	2,900	673	24–36	7,000	31,500	33,743	1,305
411	Marquette College	0	0	0	5,000	.....	60	2,500	120,000	0	0
412	Ripon College	2	....	....	7,000	.....	21–24	25,000	75,000	150,000	.....
413	Seminary of St. Francis of Sales.	0	0	0	12,000	300	165	.....	250,000	.....	0
414	Northwestern University.	0	0	0	2,280	500	30	.....	58,000	0	0
	WYOMING.										
415	University of Wyoming*	....	....	....	1,500	.....	0	3,000	150,000	.....	.....

*Statistics of 1888–89.
a Includes pamphlets.

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COMMERCIAL AND BUSINESS COLLEGES.

TABLE 1.—*Summary of statistics of commercial and business colleges for 1889-'90.*

Division and State.	Number of institutions.	Instructors.			Students.					Number of students in business courses of city, normal, and secondary schools and colleges.
		Male.	Female.	Total.	Male.	Female.	Total.	Day school.	Evening school.	
1	2	3	4	5	6	7	8	9	10	11
United States	263	1,113	460	1,593	(11,255) 49,901	17,764	78,920	(930) 63,014	14,976	24,994
North Atlantic Division	86	407	159	560	(3,189) 19,054	6,389	28,582	21,288	7,294	8,622
Maine	3	17	4	21	530	184	714	665	49	625
New Hampshire	2	6	2	8	128	50	178	160	18	170
Vermont	4	8	8	16	193	138	331	273	58	133
Massachusetts	16	53	34	87	(295) 2,195	1,253	3,743	2,934	809	1,118
Rhode Island	3	12	2	14	447	294	741	671	70	58
Connecticut	6	10	4	14	612	200	812	458	354	575
New York	28	157	57	214	(1,288) 7,422	2,327	11,037	8,111	2,926	2,620
New Jersey	5	29	8	37	1,481	412	1,893	1,342	551	1,006
Pennsylvania	19	115	40	155	(1,606) 6,046	1,481	9,133	6,674	2,459	1,581
South Atlantic Division	14	48	18	66	(117) 2,358	635	3,110	2,236	774	2,436
Delaware	1	4	2	6	(117)		117	117		21
Maryland	1	7	0	7	513	70	583	477	106	462
District of Columbia	4	13	9	22	675	408	1,083	646	437	41
Virginia	1	3	1	4	176	35	211	123	88	500
West Virginia	1	4	1	5	273	76	349	222	127	
North Carolina	2	7	5	12	281	37	318	318	0	638
South Carolina										191
Georgia	4	10	0	10	440	9	449	433	16	319
Florida										254
South Central Division	27	113	34	147	(1,534) 4,217	895	6,646	(705) 4,995	946	3,158
Kentucky	2	12	1	13	957	249	1,206	985	221	597
Tennessee	9	30	17	47	(204) 1,114	224	1,642	1,154	488	494
Alabama										291
Mississippi	5	27	3	30	(87) 640	36	763	711	52	310
Louisiana	4	16	4	20	(550) 389	51	990	(550) 386	54	715
Texas	6	23	8	31	(155) 1,117	335	1,607	(155) 1,321	131	600
Arkansas	1	5	1	6	(438)		438	438		151
North Central Division	122	499	210	709	(6,265) 21,633	8,780	36,678	(225) 31,120	5,333	9,279
Ohio	23	62	32	94	(1,808) 2,051	1,112	4,971	3,918	1,053	1,501
Indiana	11	51	22	73	(255) 3,031	1,597	4,883	4,437	446	245
Illinois	14	67	16	83	(793) 5,068	1,289	7,150	6,006	1,144	1,355
Michigan	12	43	20	63	(225) 1,962	971	3,158	(225) 2,377	556	602
Wisconsin	8	26	17	43	(370) 790	286	1,446	1,260	186	677
Minnesota	5	12	11	23	(149) 962	312	1,423	1,167	256	360
Iowa	21	81	43	124	(979) 2,958	1,319	5,256	4,734	522	1,458

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TABLE 1.—*Summary of statistics of commercial and business colleges*—Continued.

Division and State.	Number of institutions.	Instructors.			Students.					Number of students in business courses of city, normal, and secondary schools and colleges.
		Male.	Female.	Total.	Male.	Female.	Total.	Day school.	Evening school.	
1	2	3	4	5	6	7	8	9	10	11
North Central Division—Continued.										
Missouri	13	96	32	128	(325) 2,972	1,156	4,453	3,661	792	1,193
North Dakota	1	4	1	5	(54)		54	54		37
South Dakota	1	1	1	2	(74)		74	65	9	86
Nebraska	6	26	7	33	(350) 1,004	413	1,767	1,693	74	482
Kansas	7	30	8	38	(683) 835	325	2,043	1,748	295	1,293
Western Division	14	66	39	105	(150) 2,639	1,115	3,904	3,375	525	1,609
Montana										37
Colorado	2	9	1	10	290	94	384	252	132	442
New Mexico										28
Indian Territory										9
Utah										96
Nevada										82
Washington	2	7	2	9	176	27	203	165	38	232
Oregon	2	8	4	12	(150) 358	185	693	514	179	220
California	8	42	32	74	1,815	809	2,624	2,448	176	463

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART I.

	Post-office.	Name.	Superintendent or principal.	Year of first opening.	Instructors.			Students.						Average daily attendance.		Annual charge for tuition.	
								Day course.			Evening course.						
					Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Day course.	Evening course.	Day course.	Evening course.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Little Rock, Ark	Little Rock Commercial College*	W. A. Stone	1874	5	1	6	.....	.....	438	.....	.....	.....	.....	.....	$50	$50
2	Auburn, Cal	Sierra Normal College and Business Institute.	Moses W. Ward	1883	3	3	6	58	51	109	0	0	0	.....	.....	(a)	.....
3	Los Angeles, Cal	Woodbury's Business College	F. C. Woodbury	1884	5	3	8	356	119	475	0	0	0	175	0	100	.....
4	Oakland, Cal	Oakland Business College	D. C. Taylor	1876	2	1	3	60	20	80	25	5	30	.....	.....	75	40
5	Sacramento, Cal	Bainbridge Business College and Normal School.	J. C. Bainbridge	1887	3	3	6	147	98	245	26	14	40	223	36	75	50
6	San Francisco, Cal	Commercial High School	Walter N. Bush	1884	4	9	13	214	190	404	0	0	0	388	0	0	.....
7	....do	Heald's Business College	E. P. Heald	1863	12	4	16	350	150	500	.....	.....	.....	250	0	125	.....
8	....do	Pacific Business College	T. A. Robinson	1863	7	3	10	300	90	390	85	21	106	125	27	150	90
9	San Jose, Cal	Gardner City Business College	H. B. Worcester	1871	6	6	12	194	51	245	0	0	0	.....	0	85	.....
10	Denver, Colo	Denver Business College	Varnum & Benton	1889	6	....	6	160	32	192	66	30	96	60	28	a50	a35
11	Pueblo, Colo	Pueblo Business College	H. C. Warden	1887	3	1	4	37	23	60	27	9	36	.....	.....	b10	b5
12	Bridgeport, Conn	Bridgeport Business College	G. H. Turner	1882	3	0	3	97	13	110	86	98	89	50	45	a100	a35
13	....do	Martin's Shorthand and Typewriting School.	W. J. Martin	1887	1	....	1	10	32	42	12	15	27	40	20	10	5
14	Hartford, Conn	Hannum's Business College	T. W. Hannum	1877	3	1	4	125	40	165	34	3	37	80	20	75	a18
15	....do	Huntsinger's Business College and School of Stenography.	E. M. Huntsinger	1888	2	1	3	79	32	111	37	9	46	.....	.....	103	25
16	Hartford, Conn., (774 Main st.).	Robertson's Shorthand School	Ella M. Olmstead	1887	0	1	1	10	20	30	35	15	50	25	37	60	60
17	New Haven, Conn	Gaffey's Shorthand School	John T. Gaffey	1884	1	1	2	.....	.....	.....	.....	.....	60	.....	.....	b10	b5
18	Wilmington, Del	Goldey's Wilmington Commercial College.*	H. S. Goldey	1886	4	2	6	.....	117	.....	.....	90	.....	.....	.....	80	20
19	Washington, D. C	Business Department, Washington High School.	F. R. Lane	1882	2	0	2	119	85	204	0	0	0	122	0	0	.....
20	....do	Columbia College of Commerce	Charles K. Urner	1889	3	2	5	64	37	101	127	41	168	.....	.....	50	40
21	....do	H. C. Tanner's Shorthand and Typewriting Bureau.	Hudson C. Tanner	1889	1	2	3	20	41	61	0	0	....	47	.....	b10	.....
22	....do	Spencerian Business College	Henry C. Spencer	1864	7	5	12	170	111	281	175	94	269	120	115	70	60
23	Atlanta, Ga	Moore's Business College and School of Shorthand.	Benjamin F. Moore	1868	2	...	2	120	5	125	....	....	....	80	..	75	.....
24	Augusta, Ga	Osborne's Business College	S. L. Osborne	1889	3	0	3	100	8	108	10	1	10	40	10	50	.....

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25	....do	St. Patrick's Commercial Institute	Brother Francis	1875	5	0	5	190	0	190	0	0	0	150	0	20-30	.....
26	Macon, Ga	Macon Commercial College	W. McKay	1881	...	...	...	15	1	15	...	...	...	...	...	50	.....
27	Chicago, Ill	Kimball's Training School	D. Kimball	1884	1	0	1	16	52	68	17	2	19	12	5	*b*10	*b*6
28	....do	Metropolitan Business College	O. M. Powers	1873	11	2	13	2,367	386	2,753	242	36	278	400	160	100	29
29	....do	West Side Business College	Frederick F. Judd	1872	4	...	4	.....	.....	200	.....	.....	100	.....	.....	100	50
30	Danville, Ill	Danville Business College*	M. English	1889	3	1	4	.....	.....	318	.....	.....	.....	.....	.....	40	.....
31	Dixon, Ill	Dixon Business College	J. B. Dille	1881	5	2	7	250	85	335	.....	.....	.....	297	.....	35	.....
32	Freeport, Ill	Freeport College of Commerce and Northwestern Normal School.	J. J. Nagle, M. E.	1888	6	2	8	40	25	65	40	20	60	.....	.....	50	30
33	Galesburg, Ill	Galesburg Business College	G. W. Brown	1890	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	Jacksonville, Ill	Jacksonville Business College*	Geo. W. Brown	1866	5	3	8	.....	.....	287	.....	.....	34	.....	.....	75	20
35	Joliet, Ill	Joliet Business College and English Training School.	Homer Russell	1866	3	2	5	450	50	500	100	50	150	300	75	50	40
36	Onarga, Ill	Grand Prairie Seminary and Commercial College.	E. McClish	.....	2	0	2	140	211	351	0	0	0	194	.....	35	.....
37	Peoria, Ill	Brown's Peoria Business College	G. W. Brown	1865	3	1	4	200	58	258	.....	.....	74	175	28	75	20
38	Quincy, Ill	Gem City Business College	D. L. Musselman, A. M	1870	12	1	13	652	48	700	.....	.....	.....	350	.....	60	.....
39	Rockford, Ill	Rockford Business College	G. A. Winans, W. H. Johnson.	1865	7	1	8	210	120	330	75	30	105	125	50	60	25
40	Springfield, Ill	Springfield Business College	S. Bogardus	1864	5	1	6	110	49	159	67	14	81	.....	.....	65	25
41	Danville, Ind	Central Normal College	C. A. Hargrave	1876	11	3	14	813	368	1,181	0	0	0	.....	.....	18	.....
42	Evansville, Ind	Evansville Commercial College	S. N. Curnick	1850	3	2	5	100	25	125	40	0	40	.....	.....	50	30
43	Fort Wayne, Ind	McDermut & Whiteleather's Business College.	McDermut & Whiteleather.	1885	4	2	6	81	69	150	64	11	75	75	47	40, 50	27, 36
44	Hope, Ind	Normal and Commercial College	Jas. H. Clark	1884	3	2	5	123	72	195	.....	.....	.....	48	.....	38	.....
45	Indianapolis, Ind	Indianapolis Business University	E. J. Heib	1850	7	4	11	202	70	272	74	17	91	100	40	90	20
46	Lafayette, Ind	Union Business College	J. H. Bachtenkircher and W. R. Oyler.	1880	3	1	4	110	40	150	20	10	30	.....	.....	45	18
47	Logansport, Ind	Hall's Business College*	E. A. Hall	1867	3	...	3	.....	.....	172	.....	.....	35	.....	.....	40	20
48	Laporte, Ind	Holmes Shorthand and Business College.	O. A. Whitmer	1878	2	1	3	53	12	65	12	3	15	.....	.....	.....	.....
49	Richmond, Ind	Richmond Business College and Institute of Penmanship and Shorthand.	O. E. Fulghum	1860	6	1	7	185	65	250	40	10	50	100	50	40	40
50	Terre Haute, Ind	The Terre Haute Commercial College	W. C. Isbell	1862	3	3	6	237	80	317	0	0	0	.....	.....	.....	.....
51	Valparaiso, Ind	Northern Indiana Business College	H. B. Brown	1876	6	3	9	824	516	1,340	0	0	0	476	0	40	.....
52	Bloomfield, Iowa	Normal and Scientific School	R. S. Gales	1878	4	2	6	90	70	160	0	0	0	86	0	32	.....
53	Burlington, Iowa	Elliott's Business College	G. W. Elliott	1879	11	3	14	550	100	650	.....	.....	.....	.....	.....	.....	.....
54	Cedar Rapids, Iowa	Cedar Rapids Business College	A. N. Palmer	1879	4	3	7	.....	.....	320	.....	.....	.....	.....	.....	60, 75	.....
55	Clinton, Iowa	Clinton Business College	O. P. Judd	1886	4	2	6	126	68	194	.....	.....	.....	110	.....	45	.....
56	Council Bluffs, Iowa	Western Iowa College	W. S. Paulson	1884	2	2	4	130	85	215	34	18	52	75	26	50	20
57	Davenport, Iowa	Iowa Business College*	Wood & Van Patten	1884	7	2	9	.....	.....	442	.....	.....	45	.....	.....	50	15
58	Decorah, Iowa	Decorah Institute	J. Breckinridge	1884	4	2	6	250	119	369	.....	.....	.....	.....	.....	*b*3	.....
59	....do	Valder Business College and Normal School.	C. H. Valder	1888	4	4	8	190	123	313	.....	.....	.....	133	.....	*a*38	.....
60	Des Moines, Iowa	Capital City Commercial College	J. M. Mehan	1884	5	4	9	254	179	433	.....	.....	.....	200	40	65	25
61	....do	Iowa Business College	A. C. Jennings	1865	4	2	6	223	63	286	.....	.....	.....	.....	.....	*c*75	25
62	Dubuque, Iowa	Bayless Business College	C. Bayless, A. M	1858	4	1	5	.....	.....	.....	.....	.....	.....	.....	.....	75	25
63	....do	Mathematical School*	John Henry Metcalf	1873	1	0	1	.....	.....	18	.....	.....	19	.....	.....	60	36
64	Garner, Iowa	Northern Iowa Business University	F. H. Worden	1888	3	1	4	.....	.....	50	0	0	0	.....	0	60	.....
65	Iowa City, Iowa	Iowa City Commercial College	J. H. Williams	1865	5	2	7	163	40	203	.....	.....	.....	70	.....	50	.....
66	Keokuk, Iowa	Gate City Business College	Chandler H. Pierce	1857	3	...	3	85	19	104	31	5	36	74	31	50	30

* From statistics of 1888-89. *a* For six months. *b* Per month. *c* Per term. *d* For three months. *e* Four months.

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART I—Continued.

	Post-office.	Name.	Superintendent or principal.	Year of first opening.	Instructors.			Students. Day course.			Students. Evening course.			Average daily attendance.		Annual charge for tuition.	
					Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Day course.	Evening course.	Day course.	Evening course.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
67	Marshalltown, Iowa	Connor's Business College	Chas. J. Connor	1890	3	1	4	10	22	32	.....	.....	.....	.....	.....	$50	$50
68	Muscatine, Iowa	Muscatine Commercial College	J. B. Harris	1886	1	2	3	57	8	65	0	0	0	30	0	50	.....
69	Oskaloosa, Iowa	Oskaloosa Business College	Chas. J. Connor	1866	3	2	5	103	49	152	12	5	17	74	11	50	50
70	Ottumwa, Iowa	Ottumwa Business College and Shorthand Institute.	J. W. O. Bryan	1864	3	1	4	280	175	355	190	100	290	401	.....	60	15
71	Sioux City, Iowa	Northwestern Business College*	O. S. Davidson	1883	3	2	5	.....	.....	122	.....	.....	63	.....	.....	75	18
72	Waterloo, Iowa	Waterloo Collegiate Institute and Commercial College.	A. F. Harvey and W. H. Brown.	1886	3	2	5	80	70	150	.....	.....	.....	45	.....	30	.....
73	Atchison, Kans	Atchison Business College	Coonrod & Smith	1885	4	1	5	90	48	138	38	13	51	50	25	50	25
74	Arkansas City, Kans	Gate City Business College	C. E. Lowe	1889	3	.....	3	.....	.....	49	.....	.....	.....	.....	.....	40	40
75	Emporia, Kans	Emporia Business College*	O. W. Miller	1881	5	3	8	.....	.....	285	.....	.....	75	.....	.....	40	20
76	Lawrence, Kans	Lawrence Business College*	E. L. McIlrary	1869	8	2	10	.....	.....	423	.....	.....	.....	.....	.....	50	.....
77	Leavenworth, Kans.	Central Business College		1887	2	1	3	45	20	65	25	5	30	30	20	50	25
78	Topeka, Kans	Pond's Business College	M. A. Pond	1867	2	0	2	106	22	128	78	15	93	40	29	100	30
79	Wichita, Kans	Southwestern Business College	E. H. Fritch	1885	6	1	7	415	194	609	38	8	46	340	12	67	45
80	Louisville, Ky	Bryant & Stratton Business College	Enos Spencer	1864	9	1	10	607	178	785	110	11	121	218	76	125	35
81	....do	Southern Business College	Ben. C. Weaver	1878	3	0	3	180	20	200	50	0	100	40-70	40-60	a35	a35
82	New Orleans, La	Euston's Business College	B. B. Euston	1887	2	.....	2	52	8	60	32	6	38	10	12	b7-10	b5
83	....do	J. W. Blackman's Commercial College	J. W. Blackman	1862	3	.....	3	.....	.....	.....	16	.....	16	0	6	10	8
84	....do	Soulé Commercial College and Literary Institute.	Geo. Soulé	1856	10	1	11	289	37	326	289	37	326	.....	.....	150	120
85	....do	St. John the Baptist*	H. H. Ward	1854	1	3	4	.....	.....	550	.....	.....	.....	.....	.....	20	.....
86	Augusta, Me	Dirigo Business College	R. B. Capen	1863	8	.....	8	210	59	269	.....	.....	.....	.....	.....	35	.....
87	Portland, Me	Portland Business College	L. A. Gray	1863	5	2	7	184	45	229	38	11	49	.....	.....	.....	.....
88	Rockland, Me	Rockland Commercial College	H. A. Howard	1880	2	2	4	98	69	167	0	0	0	50	0	60	c12
89	Baltimore, Md	Eaton & Burnett's Business College	A. H. Eaton and E. Burnett.	1878	7	.....	7	415	62	477	98	18	116	.....	.....	80	.....
90	Boston, Mass	Allen Institute	G. G. Allen	1880	2	1	3	23	88	111	5	9	14	.....	.....	100	c25
91	Boston, Mass. (608 Washington st.).	Bryant & Stratton Commercial College	H. E. Hibbard	1864	19	2	21	800	132	932	.....	.....	.....	.....	.....	.....	.....
92	Boston, Mass	Comer's Commercial College	Charles E. Comer	1840	8	5	13	235	96	331	110	34	144	220	115	150	.....
93	....do	French's Business College	Charles French	1848	2	1	3	93	29	122	0	0	0	80	0	150	90
94	....do	Hickox's Shorthand School	Wm. E. Hickox	1880	1	1	2	.....	.....	150	.....	.....	90	.....	.....	140	.....
																b15	b6

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																		120	c25
																		120	
95	do	Reckers & Bradford's Commercial School	John Reckers	1876	2	1	3	51	9	60	21	5	26					75	60
96	do	Sawyer's Commercial College	George A. Sawyer	1838	2	3	5	65	30	95	0	0	0						
97	Fall River, Mass	Holmes's Bryant & Stratton Commercial College.	Freeman A. Holmes	1867	2	2	4	41	30	71	24	11	35	22	18			100	40
98	Holyoke, Mass	Childs's Business College	C. H. Childs	1883	1	2	3	31	19	50	55	20	75	25	20			160	30
99	Lawrence, Mass	Cannon's Commercial College	G. C. Cannon	1881	2	2	4							30	35			83	53
100	Lowell, Mass	Lowell Commercial College	Albert C. Blaisdell and L. E. Kimball.	1859	2	4	6	198	213	411	198	213	411						
101	Springfield, Mass	Childs's Business College	E. E. Childs	1884	5	2	7	130	75	205	20	15	35	120	15			90	30
102	do	New England School of Shorthand and Typewriting.*	I. E. House	1887	1	0	1			24			24					50	50
103	Waltham, Mass	Commercial Department of Waltham High School.	E. D. Russell	1849	2	5	7	95	111	206				180				50	
104	Worcester, Mass	Foster's Business College*	Calvin Cady Foster	1861	1	1	2			55			22					75	50
105	do	Worcester Select School of Shorthand and Typewriting.	Geo. C. Creelman	1887	1			7	14	21	3	0	3					c50	c50
106	Battle Creek, Mich	Krug's Business College	J. B. Krug	1882	3	1	4	90	30	120				60				50	
107	Bay City, Mich	Devlin's Business College*	Cyrus H. Devlin	1880	3	3	6			127			43					58	40
108	Big Rapids, Mich	Ferris Industrial School	W. N. Ferris	1884	2	3	5	300	200	500	25	8	33	101	24			45	d15
109	Detroit, Mich	Detroit Business University	W. F. Jewell	1850	13	2	15	638	325	963	253	56	309					75	40
110	do	St. Joseph's Parochial Commercial School.*	Brother Amulwin	1889	4	3	7			95									
111	Grand Rapids, Mich	Grand Rapids Business College and Practical Training School.	A. S. Parish	1866	4	0	4	84	35	119	61	8	69					50	
112	do	Welton's Commercial College	Joseph W. Welton	1888	2	2	4	40	8	48	21	15	36	28	19			50–80	25–40
113	Ionia, Mich	Poucher Business College	Irvin M. Poucher	1877	1		1	30	5	35								40	
114	Jackson, Mich	Jackson Business College*	G. M. Devlin		3	1	4			103								40	
115	Kalamazoo, Mich	Parsons Business College	W. F. Parsons	1869	2	1	3	120	30	150	20	5	25	85	10			55	35
116	Lansing, Mich	Interlake Business College	W. A. Johnson	1867	4	2	6	172	161	333	0	0	0	70	0			60	
117	Marquette, Mich	Upper Peninsula Business College	E. C. Glenn	1887	2	2	4	62	47	109	32	8	40	34	26			60	30
118	Duluth, Minn	Parsons Business College*	W. F. Parsons	1885	2	1	3			115			34					100	75
119	Minneapolis, Minn	Curtis Commercial College	C. C. Curtiss		4	4	8	326	139	465	71	18	89					90	c20
120	St. Paul, Minn	do	do	1879	3	1	4	139	52	191	28	10	38					90	c20
121	do	St. Paul Business College	Walter K. Mulliken	1866	2	3	5	187	39	226	44	13	57					100	60
122	Winona, Minn	Winona Business College	R. A. Lambert	1878	1	2	3	150	20	170	21	4	25	80	18			65	24
123	Bay St. Louis, Miss	St. Stanislaus Commercial College	Bro. Stanislaus	1855	10		10	90		90				90				280	
124	Jackson, Miss	Capital Commercial College	Wyatt and Sharp	1884	4	1	5	170	26	196				50				40	40
125	Meridian, Miss	State Business College	W. H. Fry	1889	3	1	4	130	10	140	20		20	35	7			35	20
126	Vicksburg, Miss	St. Aloysius Commercial College	Brother Charles	1879	8	0	0	230	0	230	0	0	0	195	0			2–5	
127	do	Vicksburg Commercial School*	G. A. McDonald	1888	2	1	3			55			32					b5	b4
128	Caledonia, Mo	Bellevue Collegiate Institute	S. McSpaden	1868	3	2	5	80	65	145				125				40	
129	Chillicothe, Mo	Chillicothe Normal School and Business Institute.	Allen Moore, B. S.	1890	20	5	25	250	200	450								e1	
130	Humphreys, Mo	Humphreys College and Business Institute.	G. A. Smith	1884	6	2	8	75	73	148								20	
131	Kansas City, Mo	National Business College	Henry Coon	1884	7		7	200	125	325	60	35	95	70	40			60	30
132	Kirksville, Mo	Kirksville Mercantile College	W. J. Smith	1880	4	1	5	177	68	245								40	
133	Perry, Mo	Perry Institute and Business College	E. McCulley	1886	6	3	9											41	
134	St. Joseph, Mo	Ritner's Commercial College	P. Ritner	1879	5	3	8	163	68	231	47	12	59	83	32			50	35

* From statistics of 1888–89 *a* For three months. *b* Per month. *c* For six months. *d* For five months. *e* Per week.

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90*—Continued.

	Post-office.	Name.	Superintendent or principal.	Year of first opening.	Instructors.			Students. Day course.			Students. Evening course.			Average daily attendance.		Annual charge for tuition.	
					Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Day course.	Evening course.	Day course.	Evening course.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	St. Joseph, Mo	St. Joseph Commercial College	Bro. Marcellian	1867	8	0	8	200	0	200	0	0	0	180		$30, 40, 50	
136	St. Louis, Mo	Jones Commercial College	J. G. Bohmer	1841	5	1	6	253	67	320	117	11	128	180	91	100	$50
137	St. Louis, Mo. (322 Chestnut st.).	Mound City Commercial College	Thos. A. Rice	1859	4	....	4	80	2	82	53	....	53	50	45	100	a30
138	St. Louis, Mo	Perkins & Herpel's Mercantile College.	H. C. Perkins and P. J. Herpel.	1882	4	....	4	67	15	82	125	7	132	50	100	100	50
139	Sedalia, Mo	Central Business College	C. W. Robbins	1883	12	2	14	700	133	838	700	133	833	205	150	60	30
140	Stanberry, Mo	Northwestern Normal School, Business and Shorthand Institute.	John E. Fesler	1881	12	6	18	325	275	600	....	....	....	200	.....	40	.....
141	Hastings, Nebr	Queen City Business College	J. H. Schoonover	1888	1	2	3	40	26	66	28	5	33	15	10	b25	b25
142	Lincoln, Nebr	Lincoln Business College and Institute of Penmanship, Short-hand, Typewriting, and Telegraphy.	Lillibridge and Roose.	1884	7	....	7	459	190	649	30	14	41	.....	.....	60	36
143	Omaha, Nebr	Omaha Commercial College*	M. G. Rohrbough	1872	5	1	6	.....	....	350	....	....	....	.....	.....	65	.....
144	....do	Rathbun's Omaha Business	G. P. Rathbun	1873	5	1	6	376	124	500	....	....	....	.....	.....	65	.....
145	Stromsburg, Nebr	Stromsburg Normal and Business College.	J. J. Bryant	1889	7	3	10	51	53	104	0	0	0	75	.....	44	.....
146	York, Nebr	York College of Commerce	J. George	1890	1	0	1	20	4	24	0	0	0	.....	.....	36	.....
147	New Hampton, N. H.	New Hampton Literary and Biblical Institution and Commercial College.	A. B. Meservey, A.M., PH. D.	1878	3	....	3	81	15	96	....	....	....	.....	.....	c13	.....
148	Portsmouth, N. H	Smith's Academy and Commercial School.	Lewis E. Smith	1873	3	2	5	42	22	64	5	13	18	.....	.....	.....	.....
149	Newark, N. J	Jersey City Business College	Wm. E. Drake	1884	4	1	5	60	44	104	105	16	121	45	60	75	25
150	Jersey City, N. J	Coleman National Business College	H. Coleman	.....	5	3	8	325	86	411	42	13	55	.....	.....	85	c35
151	Newark, N. J	New Jersey Business College	C. T. Miller	1874	7	1	8	172	33	205	80	16	96	110	75	70	30
152	Trenton, N. J	The Stewart and Hammond Business College.	Thos. J. Stewart	1883	7	1	8	241	63	304	115	31	146	190	100	75	30
153	....do	Trenton Business College	Andrew J. Rider	1866	6	2	8	218	100	318	123	10	133	100	50	75	30
154	Albany, N. Y	Albany Business College	John R. Carnell	1850	8	3	11	502	140	642	50	15	65	300	50	100	40
155	Binghamton, N. Y	The Lowells' Business College	J. E. Bloomer	1859	4	2	6	180	50	230	80	25	105	45	25	100	40
156	Brooklyn, N. Y	Claghorn's Bryant & Stratton's Business College.*	Chas. Claghorn	1861	7	1	8	....	....	904	....	....	....	....	....	120	40

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157	....do	French's Business College*	Geo. W. French, LL. B.	1868	1	3	4	----	----	331	----	----	----	----	----	60	70
158	Brooklyn, N. Y. (45–49 Ashland Place).	Kissick's Business College	W. A. Kissick	1866	10	4	14	402	214	618	0	0	0	0	0	0	0
159	Brooklyn, N. Y	St. James Commercial School	Brother John	1850	13	0	13	483	----	483	0	0	0	450	----	120	30
160	....do	Wright's Business College	Henry C. Wright	1873	6	3	9	----	----	----	----	----	193	----	----	75	45
161	Buffalo, N. Y	Buffalo College of Commerce	C. O. Perrin	1857	9	8	17	600	200	800	350	118	468	350	300	75	40
162	....do	Buffalo Business University	C. M. Johnson	1886	5	1	6	216	93	309	107	44	151	----	----	75	40
163	Elmira, N. Y	Elmira School of Commerce and Shorthand Institute.	N. A. Miller	1880	7	3	10	254	145	399	36	8	44	200	28	25–88	5–15
164	Geneva, N. Y	Geneva Business College and Shorthand Institute.	Ansel E. Mackey	1880	2	2	4	37	6	43	13	2	15	30	10	40	25
165	Glens Falls, N. Y	Glens Falls Business College*	E. O. Sylvester	1887	1	2	3	----	----	----	----	----	56	----	----	----	21
166	Ithaca, N. Y	Wyckoff's Phonographic Institute	Mrs. M. A. Adsitt	1865	----	3	3	10	12	22	0	0	0	14	0	100	----
167	Jamestown, N. Y	Jamestown Business College	J. J. Crandall	1886	5	0	5	65	58	123	17	12	29	68	15	50	20
168	Lima, N. Y	Genesee Business University	Frank A. Bateman	1890	3	1	4	85	40	125	----	----	----	----	----	75	----
169	New York, N. Y	E. D. Lyon's Classical School*	E. D. Lyon, A. M., PH. D.	1881	6	0	6	----	----	----	30	----	----	----	----	150–300	----
170	....do	Manhattan Business College	Rev. Bro. Castoris	1864	12	----	12	225	----	225	12	----	12	175	7	40	30
171	....do	Packard's Business College and School of Stenography.	S. S. Packard	1858	9	5	14	450	150	600	0	0	0	----	----	200	----
172	....do	Paine's Business College	Rutherford and Howell.	1849	4	1	5	197	51	284	108	30	138	----	----	88	88
173	New York, N. Y. (107 W. 34th st.).	The Paine Uptown Business College	F. W. Remington	1872	3	3	6	202	47	249	165	41	206	50	23	40–96	40–65
174	New York, N. Y	Walworth's Business and Stenographic College.	C. A. Walworth, LL. B.	1771	3	----	3	100	50	150	50	10	60	100	40	135	100
175	Olean, N. Y	Westbrook Commercial College	E. D. Westbrook	1882	4	1	5	84	37	121	27	9	36	60	24	60	25
176	Peekskill, N. Y	Westchester County Institute	Charles Untereiner	1877	2	1	3	24	20	34	----	----	----	40	----	60	----
177	Poughkeepsie, N. Y	Eastman Business College	Clement C. Gaines	1859	13	3	16	1,093	76	1,169	129	12	141	400	25	100	20
178	Rochester, N. Y	Rochester Business University	L. L. Williams and F. E. Rogers.	1863	7	2	9	324	81	405	62	19	81	----	----	120	a30
179	....do	Taylor & Son's Business College	A. J. Taylor	1876	3	1	4	95	80	175	100	25	125	----	----	b35	b12
180	Troy, N. Y	Troy Business College	Thos. H. Shields	1858	7	1	8	410	154	564	110	70	180	175	108	100	60
181	Utica, N. Y	Utica Business College	G. F. Hendricks, T. H. Shields.	1863	3	3	6	114	41	155	34	13	47	----	----	75	35
182	Littleton, N. C	Littleton High School and Business Institute.	L. W. Bagley	1884	2	1	3	51	0	51	0	0	0	47	0	50	----
183	Oak Ridge, N. C	Oak Ridge Institute	J. A. and M. F. Holt	1852	5	2	7	230	37	267	----	----	----	----	----	c15	----
184	Fargo, N. Dak	Fargo College*	Rev. G. B. Barnes, A. M.	1887	4	1	5	----	----	54	----	----	----	----	----	30	----
185	Akron, Ohio	Akron Business College	O. S. Warner	1866	1	0	1	11	0	11	8	3	11	----	----	20–40	15–25
186	Canton, Ohio	The Canton Business College	William Feller	1875	3	0	3	60	26	95	47	27	74	30	28	100	45
187	Camden, Ohio	Whittaker's Shorthand School	Chas. M. Whittaker	1890	1	----	1	8	5	13	----	----	----	----	----	96	----
188	Cincinnati, Ohio	R. M. Bartlett's Commercial College	C. M. Bartlett	1834	4	1	5	238	49	287	----	----	----	----	----	60	60
189	....do	The Nelson Business College	Richard Nelson	1856	5	5	10	----	----	375	----	----	----	----	----	80	----
190	Cleveland, Ohio	Spencerian Business College	Spencer, Felton & Loomis.	1848	11	5	16	----	----	1,100	----	----	----	----	----	----	----
191	....do	Western Reserve Business College*	W. L. Shinn	1888	2	1	3	----	----	52	----	----	30	----	----	50	34
192	Columbus, Ohio	Columbus Business College	W. J. Hudson	1863	5	3	8	400	320	720	280	100	380	200	100	50	25
193	Dayton, Ohio	Miami Commercial College*	A. D. Witt	----	----	----	----	----	----	200	----	----	----	----	----	----	----

*From statistics of 1888–89. a Six months. b For three months. c Per term. d For seven months. e For five months.

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART I—Continued.

	Post-office.	Name.	Superintendent or principal.	Year of first opening.	Instructors.			Students.						Average daily attendance.		Annual charge for tuition.	
								Day course.			Evening course.						
					Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Day course.	Evening course.	Day course.	Evening course.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
194	Delaware, Ohio	National Pen Art Hall and Business College.	G. W. Michael	1872	4	2	6	320	198	518	----	----	----	----	----	$60	----
195	Findlay, Ohio	Findlay Business College	J. N. Woolfington	1883	3	1	4	52	41	93	13	10	23	48	18	45	$45
196	Germantown, Ohio	Twin Valley College, Actual Business School.	Orvon Graff Brown	1889	1	1	2	'24	34	58	5	0	5	----	----	35	25
197	Hamilton, Ohio	Ohio Commercial College	W. A. Nichols	1875	2	2	4	48	15	63	50	4	54	----	----	90	50
198	Hopedale, Ohio	Buchanan Business Institute	W. Buchanan	1885	1	1	2	42	17	59	0	0	0	30	0	40	----
199	Mansfield, Ohio	Ohio Business College	Joseph W. Sharp, M. S., PH. D.	1866	2	1	3	104	38	142	----	----	----	40	----	75	----
200	Oberlin, Ohio	Oberlin Business College	McKee and Henderson.	1876	2	1	3	161	53	214	----	----	----	----	----	----	----
201	Springfield, Ohio	The Nelson Business College Company	R. J. Nelson	1881	3	----	3	----	----	----	----	----	----	----	----	50	----
202	do	Van Sickle's Practical Business College*	John W. Van Sickle	1871	1	0	1	----	----	28	----	----	23	----	----	40	20
203	do	Williss College of Shorthand	F. W. Williss	1880	1	2	3	----	----	----	----	----	----	----	----	100	----
204	Toledo, Ohio	Toledo Business College and Shorthand School.	M. H. Davis	1870	5	0	5	400	200	600	75	25	100	200	75	60	25
205	Washington C. H., Ohio.	Ohio Business University	Edmund J. H. Duncan.	1885	2	2	4	98	32	130	47	14	61	108	52	80	40
206	Youngstown, Ohio	Normal Business College	J. C. Steiner	1886	1	3	4	76	84	160	32	20	52	50	20	35	35
207	Zanesville, Ohio	Zanesville Business College	C. C. Kennison	1865	2	1	3	----	----	----	130	60	180	60	25	50	20
208	Baker City, Oregon	Baker City Normal and Business College.	S. A. Danford, PH. B.	1886	2	1	2	18	16	34	20	9	29	30	18	25	25
209	Portland, Oregon	Portland Business College	A. P. Armstrong	1866	6	3	9	320	100	480	----	----	----	150	----	60	60
210	Allentown, Pa	Allentown Business College	W. L. Blackman	1869	3	1	4	70	15	85	28	12	40	42	31	50	25
211	do	American Business College and Modern Office-Training School.	O. C. Dorney	1889	6	2	8	115	25	140	82	14	96	90	75	50	25
212	do	Mountain City Business College	G. G. Zeth, A. M.	1879	3	1	4	315	93	408	104	25	129	98	42	60	30
213	Easton, Pa	Easton College of Business	C. L. Free	1870	3	0	3	50	10	60	25	15	50	----	----	50	20
214	Erie, Pa	Clark's Business College	H. C. Clark	1883	7	2	9	500	100	600	150	125	275	300	75	60	25
215	Harrisburg, Pa	Keystone Business College and School of Phonography.	H. O. Bernhardt	1889	3	0	3	17	7	24	17	1	18	18	15	75	50
216	Lancaster, Pa	Keystone Business College	W. D. Mosser	1879	1	1	2	25	15	40	10	10	20	----	----	$45	$30
217	do	Lancaster Business College	M. C. Weidlon	1880	1	1	2	30	10	40	10	----	10	----	----	20	----

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218	Meadville, Pa	Bryant, Stratton & Smith Business College.	A. W. Smith	1865	4	1	5	17	348	221	35	1	95	93 58		47	45	15
219	Philadelphia, Pa. (1709 Chestnut st.).	Palms Business College	T. W. Palms	1885	3	0	3	121	0	121	74	0	74				50	12
220	Philadelphia, Pa	Peirce College of Business and Shorthand.	Thos. May Peirce, M. A., PH. D.	1885	20	3	23	569	171	740	344	57	401	370	240		120	25
221	do	Prickett College of Commerce	Thos. J. Prickett	1881	16	3	19	541	153	694	371	102	473				110	b25
222	Pittsburg, Pa	Curry University	J. Clark Williams	1880	18	12	30			1606							65	b25
223	do	Duff's Mercantile College	P. Duff & Sons	1840	7	0	7	800	100	900	150	50	200				50	25
2	Scranton, Pa	Wood's Business College	F. E. Wood	1890	6	6	12	401	139	540	231	13	244	400	200		40	30
225	Union City, Pa	Luce's Commercial College	N. R. Luce	1876	1	2	3	30	10	40	30	10	40				{20, 40} 60	
226	Wilkesbarre, Pa	Wilkesbarre Business College	Chas. A. Miner	1885	8	1	9	117	33	150	132	11	163	50	59		50	50
227	Williamsport, Pa	Williamsport Commercial College and School of Shorthand.	F. M. Allen	1865	4	3	7	175	25	200	70	5	75				25	12
228	York, Pa	Bacheldor's Business College	J. M. Bacheldor	1886	1	0	1	20	5	25	14	0	14	12	8		40	20
229	East Greenwich, R.I.	Greenwich Business College	Francis D. Blakeslee, D. D.	1802	1	0	1	62	36	98				45			35	
230	Providence, R. I	Providence Bryant & Stratton Business College.	Theo. B. Stowell	1863	7	1	8	217	107	324	38	7	45				100	15
231	do	Scholfield's Commercial College	Albert G. Scholfield	1846	4	1	5	113	36	149	17	8	25	125	18			
232	Sioux Falls, S. Dak.	Sioux Falls Business College*	J. L. Wallace	1887	1	1	2			65			9				50	25
233	Benton, Tenn	Benton Academy and Business College	H. H. Kellogg	1890	2	3	5										30–40	
234	Chattanooga, Tenn	Behm's Chattanooga Commercial College.	Jeremiah Behm	1875	1	0	1	10	4	14	15		15	10	14		40	
235	do	Mountain City Business College and School of Shorthand and Typewriting.	J. A. Wiley and E. L. Wiley.	1886	2	3	5										70	30
236	Knoxville, Tenn	Knoxville Business College	J. T. Johnson	1884	4	0	4	175	25	200	40	5	45	60	15		80	35
237	Memphis, Tenn	Leddin Business College*	W. T. Watson, LL. B.	1864	4	0	4			256			48				95	45
238	do	Nelson Business College	A. E. Nelson	1887	6	0	6	147	27	167	36		36				80	50
239	Nashville, Tenn	Goodman's Business College	Frank Goodman	1870	2	1	3	150	0	150				114			a 10	
240	do	Jennings Business College	R. W. Jennings	1884	5	0	5	140	5	145	12	0	12	40	6		50	50
241	Washington, Tenn	Christie's Musical and Business College.	H. R. Christie	1877	4	0	4	93	107	200							30	
242	Austin, Tex	Capital Business College	O. G. Neumann	1883	4	3	7	110	45	155	26	2	28	56	18		5	3
243	Dallas, Tex	Hill's Business College*	J. H. Gillispie	1888	5	0	5			140			15				50	25
244	Fort Worth, Tex	Fort Worth Business College	F. P. Preuitt	1879	4	1	5	285	55	340	87	16	103	95	64		50	40
245	Thorps Spring, Tex	Commercial Department, Add-Ran University.	A. C. Easley	1885	1	1	2	94	65	159	0	0	0	125	0		70	
246	Waco, Tex	Hill's Waco Business College	R. H. Hill	1880	6	1	7	375	25	400				125			50	
247	Whitesboro, Tex	Whitesboro Graded School	W. T. Potter	1884	3	2	5	140	127	267				165				
248	Burlington, Vt	Burlington Business College	E. G. Evans	1878	1	2	3	48	29	77	30	1	31	40	12		56	15
249	Lynden Center, Vt	Lynden Commercial College	Walter E. Ranger, A. M.	1884	3	1	4	50	17	67	0	0	0	40	0		10	
250	Rutland, Vt	Rutland English and Classical Institute and Business College.	G. W. Perry and O. H. Perry.	1889	3	4	7	35	22	57	8	19	27				75	45
251	Waterbury Center, Vt.	Minard Commercial School	Elizabeth Colley		1	1	2	52	50	102	0	0	0				26	
252	Richmond, Va	Smithdeal Business College	G. M. Smithdeal	1867	3	1	4	90	33	123	86	2	88	60	30		40	40
253	Spokane Falls, Wash.	Spokane Business College	E. E. Martin	1877	4	1	5	72	8	80	9	4	13	48	10		a 12	a 10

*From statistics of 1888–89.

a Per month.

b For six months.

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART I—Continued.

	Post-office.	Name.	Superintendent or principal.	Year of first opening.	Instructors.			Students. Day course.			Students. Evening course.			Average daily attendance.		Annual charge for tuition.	
					Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Day course.	Evening course.	Day course.	Evening course.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
254	Wallawalla, Wash	Empire Business College	A. M. Cation	1887	3	1	4	70	15	85	25	0	25	40	15	$60	$24
255	Wheeling, W. Va	Wheeling Business College	J. M. Frasher	1860	4	1	5	153	69	222	110	7	117	68	44	45	45
256	Appleton, Wis	De Land's Business College	O. P. De Land	.....	3	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
257	Chippewa Falls, Wis.	Chippewa Falls Business College and School of Shorthand and Typewriting.	C. H. Howieson	1887	1	1	2	27	20	47	.....	.....	.....	40	.....	60	a24
258	Green Bay, Wis	Green Bay Business College	J. N. McCunn	1868	3	3	6	116	27	153	25	6	31	55	23	60	25
259	La Crosse, Wis	La Crosse Business College	J. L. Wallace	1868	2	1	3	110	120	130	12	2	14	.....	.....	40	55
260	Madison, Wis	Northwestern Business College	R. G. Deming and J. C. Proctor.	1856	5	1	6	146	57	203	32	3	35	125	20	45	20
261	Milwaukee, Wis	Charles Mayer's Commercial College	Charles Mayer	1876	6	4	10	.....	.....	370	.....	.....	.....	.....	.....	100	60
262	do	Spencerian Business College	Robert C. Spencer	1863	4	4	8	217	44	261	39	26	65	90	45	44	44
263	do	Wilmot Business and Shorthand College	H. M. Wilmot	1881	2	2	4	34	62	96	32	9	41	.....	.....	55	40

a For six months.

b Per month.

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TABLE 2.—*Statistics of commercial and business colleges for 1889–90.*—PART II.

	Name.	Commercial studies.															Amanuensis studies.		Telegraphy.	Academic studies.								
		Bookkeeping.	Business arithmetic.	Penmanship.	Commercial law.	Commercial geography.	Office or counting house.	Insurance company.	Transportation company.	College bank.	Importing and jobbing house.	Commission house.	Business correspondence.	French.	German.	Spanish.	Typewriting.	Stenography.		English language and literature.	Latin.	Greek.	Arithmetic, higher.	Algebra.	Geometry.	Physics.	Chemistry.	History, general.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	Little Rock Commercial College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	Sierra Normal College and Business Institute.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	Woodbury's Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4	Oakland Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5	Bainbridge Business College and Normal College.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6	Commercial High School	397	397	397	397	397	139	....	....	....	....	....	397	0	0	287	348	397	0	397	0	0	397	....	215	215	215	....
7	Heald's Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8	Pacific Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9	Garden City Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10	Denver Business College	99	103	288	99	....	....	....	....	....	....	....	288	....	2	....	80	80	....	....	....	....	....	....	....	....	....	....
11	Pueblo Business College	45	35	45	12	9	18	....	....	18	....	....	33	....	....	....	21	20	....	....	....	....	....	....	....	....	....	....
12	Bridgeport Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
13	Martin's Shorthand and Typewriting School.	0	0	0	0	0	0	0	0	0	0	0	79	0	0	0	79	79	2	....	....	....	....	....	....	....	....	....
14	Hannum's Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15	Huntsinger's Business College and School of Stenography.	146	141	157	80	....	53	53	53	53	53	53	157	....	....	....	24	24	....	....	....	....	....	....	....	....	....	....
16	Robertson's Shorthand School	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	18	22	....	....	....	....	....	....	....	....	....	....
17	Gaffey's Shorthand School	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
18	Goldey's Wilmington Commercial College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
19	Business Department, Washington High School.	204	204	0	57	57	0	0	0	16	0	0	0	0	0	0	0	40	0	204	0	0	0	135	4	40	17	156
20	Columbia College of Commerce	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
21	H. C. Tanner's Shorthand and Typewriting Bureau.	....	61	61	0	0	61	0	0	0	0	0	61	0	0	2	61	61	0	61	0	0	0	0	0	0	0	0
22	Spencerian Business College	440	440	440	440	440	....	....	23	19	22	....	440	....	....	....	110	90	12	440	....	....	....	....	....	....	....	....
23	Moore's Business College and School of Shorthand.	....	125	125	125	....	....	....	....	....	....	....	125	....	....	....	15	15	....	....	....	....	....	....	....	....	....	....
24	Osborne's Business College	25	25	30	....	....	....	....	....	....	....	25	25	....	....	....	10	4	....	....	....	....	....	....	....	....	....	....
25	St. Patrick's Commercial Institute	12	12	24	12	24	5	....	....	....	5	5	12	....	....	....	....	....	....	5	....	....	24	7	7	....	....	12

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART II—Continued.

	Name.	Commercial studies.															Amanuensis studies.			Academic studies.								
		Bookkeeping.	Business arithmetic.	Penmanship.	Commercial law.	Commercial geography.	Office or counting house.	Insurance company.	Transportation company.	College bank.	Importing and jobbing house.	Commission house.	Business correspondence.	French.	German.	Spanish.	Typewriting.	Stenography.	Telegraphy.	English language and literature.	Latin.	Greek.	Arithmetic, higher.	Algebra.	Geometry.	Physics.	Chemistry.	History, general.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
26	Macon Commercial College	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....
27	Kimball's Training School	....	....	....	....	....	....	....	....	....	....	....	87	....	+	....	87	87	....	....	....	....	....	....	....	....	....	....	....
28	Metropolitan Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
29	West Side Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
30	Danville Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
31	Dixon Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
32	Freeport College of Commerce and Northwestern Normal School.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
33	Galesburg Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
34	Jackson Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
35	Joliet Business College and English Training School.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
36	Grand Prairie Seminary and Commercial College.	45	75	120	48	....	....	....	....	25	....	....	....	....	....	....	13	10	5	....	....	....	....	....	....	....	....	....	....
37	Brown's Peoria Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
38	Gem City Business College	680	680	680	680	....	412	....	406	112	107	17	680	....	....	....	32	26	....	....	....	....	....	....	....	....	....	....	....
39	Rockford Business College	190	177	360	80	55	96	....	....	8	56	....	137	....	....	....	78	78	....	172	....	....	130	18	....	10	....	....	....
40	Springfield Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
41	Central Normal College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
42	Evansville Commercial College	125	125	125	125	....	125	....	....	125	125	125	125	....	....	....	40	40	....	....	....	....	....	....	....	....	....	....	....
43	McDermut & Whiteleather's Business College.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
44	Normal and Commercial College	23	48	71	10	....	23	23	23	23	23	23	23	....	....	....	16	10	....	54	....	....	71	22	....	....	....	11	....
45	Indianapolis Business University	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
46	Union Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
47	Hall's Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
48	Holmes Shorthand and Business College	30	20	29	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
49	Richmond Business College and Institute of Penmanship and Shorthand School.	200	200	200	200	....	200	200	200	200	200	200	8 200	....	....	....	35	35	....	....	....	....	....	....	....	....	....	....	....
50	The Terre Haute Commercial College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	50	55	....	....	....	....	....	....	....	....	....	....	....

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51	Northern Indiana Business College																				10	9	0	40	23	7	8	7	10
52	Normal and Scientific Institute	18	18	18	3	0	6	0	0	0	0	0	8		12		50	50											
53	Elliott's Business College	600	600	650	600		600	600	600	600		600	600																
54	Cedar Rapids Business College																												
55	Clinton Business College																												
56	Western Iowa College	92	190	205	20	0	0	0	0	18	0	0	70	0	0	0	28	35	0					13	0	0	0	0	
57	Iowa Business College																												
58	Decorah Institute																												
59	Valdu Business College and Normal School	160	160	160	160				160	160	160	160	160				160							64	12	2	10		6
60	Capital City Commercial College																												
61	Iowa Business College																												
62	Bayless Business College																												
63	Mathematical School																												
64	Northern Iowa Business University	30	25	50	20	0	0	0	0	25	0	21	24	0	0	0	45	25		40	0	0	0	0	0	0	0	0	0
65	Iowa City Commercial College	165	156	190	150		60			60			185	0	0	0	70	60	0										
66	Gate City Business College																												
67	Comer's Business College																												
68	Muscatine Commercial College	53	53	63	53		30			4	10	4	53				10	10	1					38					
69	Oskaloosa Business College	65	65	170	30	0	65	65	65	65	65	65	170	0	13	0	100	91	14										
70	Ottumwa Business College and Shorthand Institute.	50	41	90	23		25	35		25	25	25	50				46	40						104	34				
71	Northwestern Business College																												
72	Waterloo Collegiate Institute and Commercial College.	22	6	35	7		7						7				15	13			4			48	8	2	2	0	2
73	Atchison Business College																												
74	Gate City Business College																												
75	Emporia Business College																												
76	Lawrence Business College																												
77	Central Business College																												
78	Ponds Business College																												
79	Southwestern Business College	226	68	226	45		23			9	36	5	28				13	47	35										
80	Bryant & Stratton Business College																												
81	Southern Business College	200	200	200	200								200																
82	Euston's Business College																												
83	J. W. Blackman's Commercial College	9	9	9									9																
84	Soulé Commercial College and Literary Institute.																												
85	St. John the Baptist																												
86	Dirigo Business College	245	245	245	245												21	21											
87	Portland Business College																												
88	Rockland Commercial College																												
89	Eaton & Burnett's Business College																												
90	Allen Institute																												
91	Bryant & Stratton Commercial College																												
92	Comer's Commercial College																												
93	French's Business College	113	113	122	113		113	113	113	113	113	113	122	0	0	0	33	33											
94	Hickox's Shorthand School																												
95	Reckers & Bradford's Commercial School	76	76	76	76	0	76	0	0	76	0	0	76	2	1	1	0	0	0	2	0	0	2	2	2				2
96	Sawyer's Commercial College	65	65	70	65												15	15	0										
97	Holmes's Bryant & Stratton Commercial College.	50	34	300	15								60				24	16											
98	Childs Business College																												

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART II—Continued.

	Name.	Commercial studies.														Amanuensis studies.		Academic studies.								
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
99	Cannon's Commercial College	87	40	146	....	....	....	....	....	....	....	....	....	....	....	....	19	....	....	....	....	....	....	....	....	....	....	....
100	Lowell Commercial College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
101	Childs Business College	160	160	160	160	0	160	0	0	160	0	0	160	0	0	0	32	32	....	0	0	0	0	0	0	0	0	0
102	New England School of Shorthand and Typewriting.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	8	....	....	....	....	....	....	....	....	....
103	Commercial Department of Waltham High School.	48	48	48	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	48	....	20	27	21	21	....	....
104	Foster's Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
105	Worcester Select School of Shorthand and Typewriting.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
106	Krug's Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
107	Devlin's Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
108	Ferris Industrial School	85	76	360	52	....	75	....	75	75	75	75	345	....	....	....	55	50	....	350	....	....	360	48	25	70	....	23
109	Detroit Business University	707	879	880	707	....	200	180	180	130	180	180	860	....	....	....	318	318	....	....	....	....	....	....	....	....	....	....
110	St. Joseph's Parochial Commercial School	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
111	Grand Rapids Business College and Practical Training School.	157	....	....	....	....	....	....	....	....	....	....	....	....	....	....	31	31	....	0	0	0	0	0	0	0	0	0
112	Welton's Commercial College	64	80	77	40	60	45	37	45	27	48	48	80	0	0	0	18	12	1	26	2	0	0	4	0	0	0	2
113	Poucher Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
114	Jackson Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
115	Parsons Business College	110	120	115	110	....	90	....	....	100	102	100	120	....	....	....	65	60	....	....	....	....	....	....	....	....	....	....
116	Interlake Business College	87	182	210	67	91	18	....	....	14	....	....	120	0	0	0	50	45	....	126	0	0	17	22	7	5	....	92
117	Upper Peninsula Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....
118	Parsons Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
119	Curtiss Commercial College	222	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
120	Curtiss Commercial College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	137	137	....	....	....	....	....	....	....	....	....	....
121	St. Paul Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
122	Winona Business College	213	213	325	213	0	213	0	213	213	213	213	325	0	20	0	80	61	....	....	....	....	....	....	....	....	....	....
123	St. Stanislaus Commercial College	100	100	100	100	....	....	....	....	30	....	30	30	....	....	....	23	23	....	....	....	....	....	....	....	....	....	....
124	Capital Commercial College	45	78	90	3	75	....	....	....	....	....	....	40	40	5	....	....	....	....	60	....	....	60	60	60	0	0	60
		180	170	198	90		150	....	....	130	130	130	180	....	....	....	40	70	40	....	....	....	....	....	....	....	....	....

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125	State Business College																													
126	Vicksburg Commercial School																													
127	St. Aloysius Commercial College	30	30	180	8	50	0	0	0	0	0	0	8	0	10	0	0	30	0	8	0	0	8	30	30	8	0	30		
128	Bellevue Collegiate Institute																													
129	Chillicothe Normal School and Business Institute.	94	107	406	48					7	6	8	138				39	44		25	8	2	150	121	9	48	40	9		
130	Humphreys College and Business Institute																													
131	National Business College	250	250	250	250		145		145	145	145	145	380				265	265												
132	Kirksville Mercantile College																													
133	Perry Institute and Business College																													
134	Ritner's Commercial College	155	155														76	75	12											
135	St. Joseph's Commercial College	50	150	150	20	0	15	25	25	15	0	20	100	0	10	0	25	25	16	25	0	0	25	50	50	20	0	50		
136	Jones Commercial College	310	292	305	270		310	310	310	310	310	310	310				60	60	135											
137	Mound City Commercial College	98	132	135	64	10							131				12	12												
138	Perkins & Herpel's Mercantile College																													
139	Central Business College																													
140	Northwestern Normal School, Business and Shorthand Institute.																													
141	Queen City Business College	56																												
142	Lincoln Business College and Institute of Penmanship, Shorthand, Typewriting, and Telegraphy.																													
143	Omaha Commercial College																													
144	Rathbun's Omaha Business College	344	344	500	344												124	124												
145	Stromsburg Normal and Business College	31	22	39	15					2	2	1	10				12	5		25	5	0	30	13	6	15	8	29		
146	York College of Commerce	20	20	30	0	20	0	0	0	0	0	0	0	0	0	0	1	5	0	21	0	0	0	0	0	0	0	0		
147	New Hampton Literary and Biblical Institution and Commercial College.	40		40	40					6																				
148	Smith's Academy and Commercial College																													
149	Jersey City Business College																84	81												
150	Coleman National Business College																													
151	New Jersey Business College	301	301	301	301		60		60	60	60	60	301		35		30	40												
152	The Stewart & Hammond Business College	193	193	193	193	193	33		32	32	32	32	193				44	65		40				2						
153	Trenton Business College																													
154	Albany Business College																													
155	The Lowells' Business College	105	105	308	105		105			105	105	105	105				50	50	14											
156	Claghorn's Bryant & Stratton Business College.																													
157	French's Business College																													
158	Kissick's Business College	500	500	500	500	500							616	47	54	35	204	295	83	209	40	30	47	41	22		5	130		
159	St. James's Commercial School	60	100	300	25	150	25	72	72	25	72	72	100	0	0	0	25	72	25	100	20		25	72	72	25	25	100		
160	Wright's Business College																													
161	Buffalo College of Commerce																													
162	Buffalo Business University																													
163	Elmira School of Commerce and Shorthand Institute.	315	301	399	399		310	310	310	310	310	310	310				140	140	26	165										
164	Geneva Business College and Shorthand Institute.	39	39	52		0	27	27	27	20	20	20	29	0	0	0	0	2	2	0	0	0	1	1		1	0	1		
165	Glens Falls Business College																													
166	Wyckoff's Phonographic Institute																14	14												
167	Jamestown Business College	93	93	100	93		93	93	93	93	93	93	93	0	0	0	18	17												
168	Genesee Business University																													

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART II—Continued.

	Name.	Commercial studies.														Amanuensis studies.		Academic studies.									
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
169	E. D. Lyon's Classical School	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
170	Manhattan Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
171	Packard's Business College and School	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
172	Paine's Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
173	The Paine Uptown Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
174	Walworth's Business and Stenographic College.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
175	Westbrook Commercial College	132	150	150	....	....	....	....	....	....	....	....	121	....	....	....	20	19	12	....	....	....	....	....	....	....	....	....
176	Westchester County Institute	10	10	44	....	....	....	....	....	....	....	....	....	7	3	1	....	....	....	....	....	....	....	....	....	....	....	....
177	Eastman Business College	836	836	1030	836	836	836	836	836	836	836	836	836	0	0	0	194	194	54	0	0	0	0	0	0	0	0	0
178	Rochester Business University	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
179	Taylor & Son's Business College	125	245	320	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
180	Troy Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
181	Utica Business College	89	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
182	Littleton High School and Business Institute	21	21	51	21	....	....	....	....	21	....	....	21	....	....	14	14	16	....	....	....	....	....	....	....	....	....	....
183	Oak Ridge Institute	75	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
184	Fargo College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
185	Akron Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
186	The Canton Business College	127	127	127	127	....	127	127	127	127	127	127	127	....	....	....	42	42	....	....	....	....	....	....	....	....	....	....
187	Whittaker's Shorthand School	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	13	....	....	....	....	....	....	....	....	....	....
188	R. M. Bartlett's Commercial School	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
189	The Nelson Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
190	Spencerian Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
191	Western Reserve Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
192	Columbus Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
193	Miami Commercial College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
194	National Pen Art Hall and Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
195	Findlay Business College	320	380	470	200	....	....	258	....	380	279	311	380	....	....	....	242	218	....	....	....	....	....	....	....	....	....	....
196	Twin Valley College Actual Business School	23	23	23	23	....	5	8	3	8	8	8	10	....	....	7	6	8	....	6	7	4	4	5	4	4	4	4
197	Ohio Commercial College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

	Buchanan Business Institute	24	10	55	14	0	3	3	3	54	54	54	118	0	0	0	30														
198	Ohio Business College	54	64	141	54	0	54	54	54	54	54	54	118																		
199	Oberlin Business College																														
200	The Nelson Business College Company	100	100	100	100		100		100	100	100	100	100																		
201	Van Sickle's Practical Business College																	50	50												
202	Willis College of Shorthand			50																											
203	Toledo Business College and Shorthand School.																														
204	Ohio Business University	94	94	94	94		94	94	94	66	66	66	66				24	24	0				12	12	4	4	4	3				
205	Normal Business College	182	27														50	67	5												
206	Zanesville Business College	110																													
207	Baker City Normal and Business College	34	29	34	18		26		18	14	16	18	34	0	0	0	0	0	0				7	5	6			11			
208	Portland Business College	480	480	480	480					140		75	480				110	110													
209	Allentown Business College	97	97	97	97	3	97	97	97	97	97	97	121		1	1	17	11	9												
210	American Business College and Modern Office Training School.	90	90	110	90	90	90	90	90	90	90	99	110	0	0	0	23	30	8	15	0	0	0	1	0	0	0	0			
211	Mountain City Business College	126	187	488	126	61							250				177	340					74	36	65						
212	Easton College of Business																														
213	Clark's Business College																														
214	Keystone Business College and School of Phonography.	24	24	25	12	1	18	18	18	18	18	18	35				17	16		3			3	1				2			
215	Keystone Business College	49	49	60	59					59			60				32														
216	Lancaster Business College	98	98	98	98		98	98	98	98	98	98	98				98														
217	Bryant, Stratton & Smith Business College	87	87	221	87		87	87	87	87			221				40	50													
218	Palm's Business College																														
219	Pierce College of Business and Shorthand	946	946	946	946		946	946	946	946	946	946	946				205	205													
220	Prickett College of Commerce																														
221	Curry University																														
222	Duff's Mercantile College																														
223	Wood's Business College	651	651	651	651	651	651		651	651	651	651	651				180	188					150	55				27			
224	Luce's Commercial College	28	28	26	28		6	6	6	6	6	6	6				3	3													
225	Wilkesbarre Business College	275	275	313	150	0	0	0	0	275	0		275	0	0	0	25	25	7		0	0	0	0	0	0	0	0			
226	Williamsport Commercial College and School of Shorthand.																														
227	Bacheldor's Business College																														
228	Greenwich Business College	33	33	100	33		11	11	11	11	11	11	33	0	0	0	0	20	0	23	2										
229	Providence Bryant & Stratton Business College.																														
230	Schofield Commercial College	148	148	174	144							144					6	10		14				3	2						
231	Sioux Falls Business College																														
232	Benton Academy and Business College																														
233	Behm's Chattanooga Commercial College	29	29	5																											
234	Mountain City Business College and School of Shorthand and Typewriting.																														
235	Knoxville Business College	220	220	245	75					70			220																		
236	Leddin Business College																														
237	Nelson Business College																														
238	Goodman Business College	150	141	150	150		95	14	29	41	13	61	140																		
239	Jennings Business College																														
240	Christie's Musical and Business College																														
241	Capital Business College	87	128	155	87	87	32	10	10	32	32	32	87	8	52	19	28	34	12	125	6	2	128	18	10			60			
242	Hill's Business College																														
243																															

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART II—Continued.

	Name.	Commercial studies.															Amanuensis studies.			Academic studies.									
		Bookkeeping.	Business arithmetic.	Penmanship.	Commercial law.	Commercial geography.	Office or counting house.	Insurance company.	Transportation company.	College bank.	Importing and jobbing house.	Commission house.	Business correspondence.	French.	German.	Spanish.	Typewriting.	Stenography.	Telegraphy.	English language and literature.	Latin.	Greek.	Arithmetic, higher.	Algebra.	Geometry.	Physics.	Chemistry.	History, general.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
244	Fort Worth Business College																											
245	Commercial Department, Add-Ran University	55	65	175	0	0	0	0	0	0	18	4	32	55	2	24	11	51	39	2	55	0	0	0	0	0	0	0
246	Hill's Waco Business College	375	375	375	375	....	375	375	375	375	375	375	375	....	....	58	36	43	....	....	....	....	....	....	....	....	....	....
247	Whitesboro Graded School	11	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
248	Burlington Business College	32	60	103	26	....	....	....	....	22	....	....	108	....	....	....	20	17	....	15	....	....	....	2	....	....	....	....
249	Rutland English and Classical Institute and Business College.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
250	Lynden Commercial College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
251	Minard Commercial School	32	25	40	20	....	....	....	....	14	14	14	14	9	0	0	9	3	0	6	10	5	8	12	6	15	10	5
252	Smithdeal Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
253	Spokane Business College	85	85	85	6	14	85	85	85	85	85	85	85	3	....	2	14	12	5	12	2	1	....	3	....	....	....	5
254	Empire Business College	60	70	85	25	0	17	0	0	5	0	0	21	0	0	0	17	11	0	0	....	....	....	....	....	....	....	....
255	Wheeling Business College	175	164	339	150	....	....	....	....	45	45	45	152	....	....	....	57	57	....	....	....	....	....	....	....	....	....	3
256	De Land's Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
257	Chippewa Falls Business College and School of Shorthand and Typewriting.	25	25	25	25	....	....	....	....	....	....	....	....	....	....	....	22	22	....	....	....	....	....	....	....	....	....	....
258	Green Bay Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
259	La Crosse Business College	120	90	144	71	0	90	75	97	99	10	130	130	0	0	0	76	47	0	0	0	0	0	0	0	0	0	0
260	Northwestern Business College	58	58	238	58	0	0	0	0	0	0	58	58	0	6	0	20	40	0	....	3	....	12	7	3	3	....	....
261	Charles Mayer's Commercial College	218	....	....	....	....	....	....	....	....	....	....	....	....	46	....	46	46	....	....	....	....	....	....	....	....	....	....
262	Spencerian Business College	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
263	Wilmot Business and Shorthand College	48	....	48	48	....	....	....	....	....	....	....	137	....	....	....	89	89	10	....	....	....	....	....	....	....	....	....

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LE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART III.

Post-office.	Name.	Average length of course in days.	Average number of pupils to each teacher.	Ratio of average attendance to total number of pupils.	Ratio of graduates to total number of pupils.
1	2	3	4	5	6
				Per ct.	*Per ct.*
s Angeles, Cal	Woodbury's Business College	91	22	37	28
cramento, Cal	Bainbridge College and Normal School	218	37	91	9
n Francisco, Cal	Commercial High School	377	29	93	62
Do	Heald's Business College	60	16	50	60
Do	Pacific Business College	38	13	32	.....
enver, Colo	Denver Business College	37	10	31	29
ridgeport, Conn	Bridgeport Business College	51	17	45	45
Do	Martin's Shorthand and Typewriting	190	40	95	.....
artford, Conn	Robertson's Shorthand School	100	25	82	.....
ashington, D. C	Commercial department Washington High School.	334	96	94	27
Do	H. C. Tanner's Shorthand and Typewriting Bureau.	77	16	77	.....
Do	Spencerian Business College	85	10	43	7
tlanta, Ga	Moore's Business College and School of Shorthand.	32	25	40	53
ugusta, Ga	St. Patrick's Commercial College	568	30	78	2
hicago, Ill	Kimball's Training School	18	12	18	.....
Do.	Metropolitan Business College	35	31	15	2
Dixon, Ill	Dixon Business College	160	42	89	11
Joliet, Ill	Joliet Business College and English Training School.	168	60	60	5
Onarga, Ill	Grand Prairie Seminary and Commercial College.	78	97	55	7
Quincy, Ill	Gem City Business College	120	27	50	26
Rockford, Ill	Rockford Business College	45	16	38	4
Fort Wayne, Ind	McDermut & Whiteleather's Business College.	.....	.....	.....	.....
Hope, Ind	Normal and Commercial College	25	10	25	7
Indianapolis, Ind	Indianapolis Business University	44	9	37	18
Richmond, Ind	Richmond Business College and Institute of Penmanship and Shorthand.	40	14	40	8
Valparaiso, Ind	Northern Indiana Business College	36	53	36	56
Bloomfield, Iowa	Normal and Scientific Institute	54	14	54	6
Council Bluffs, Iowa	Western Iowa College	84	19	35	3
Decorah, Iowa	Valder Business College and Normal School.	68	17	42	11
Des Moines, Iowa	Capital City Commercial College	80	22	46	15
Iowa City, Iowa	Iowa City Commercial College	48	10	34	25
Keokuk, Iowa	Gate City Business College	85	25	71	19
Muscatine, Iowa	Muscatine Commercial College	84	10	46	10
Oskaloosa, Iowa	Oskaloosa Business College	58	15	49	11
Ottumwa, Iowa	Ottumwa Business College and Shorthand Institute.	64	36	40	2
Atchison, Kans	Atchison Business College	65	10	36	7
Leavenworth, Kans	Central Business College	112	10	40	7
Topeka, Kans	Pond's Business College	38	20	31	4
Wichita, Kans	Southwestern Business College	78	50	56	9
Louisville, Ky	Bryant & Stratton Business College	33	22	28	27
Do	Southern Business College	60	17	25	17
New Orleans, La	Euston's Business College	50	5	17	.....
Rockland, Me	Rockland Business College	73	13	30	21
Boston, Mass	Bryant & Stratton Commercial College	129	29	64	11
Do	Comer's Commercial College	140	17	70	.....
Do	French's Business College	63	10	26	61
Fall River, Mass	Holmes's Bryant & Stratton Commercial College.	37	5	31	26
Holyoke, Mass	Childs's Business College	100	9	50	8
Lawrence, Mass	Cannon's Commercial College	23	8	38	.....
Springfield, Mass	Childs's Business College	117	17	59	11
Waltham, Mass	Waltham High School	349	26	87	10
Battle Creek, Mich	Krug's Business College	180	15	50	2
Big Rapids, Mich	Ferris Industrial School	24	20	20	13
Grand Rapids, Mich	Welton's Commercial College	82	7	58	19
Kalamazoo, Mich	Parsons Business College	62	18	57	6
Lansing, Mich	Interlake Business College	25	12	21	6
Marquette, Mich	Upper Peninsula Business College	37	9	31	15
Winona, Minn	Winona Business College	75	27	47	8

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TABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART III—Continued.

Post-office.	Name.	Average length of course in days.	Average number of pupils to each teacher.	Ratio of average attendance to total number of pupils.	Ratio of graduates to total number of pupils
1	2	3	4	5	6
				Per ct.	Per ct.
Meridian, Miss	State Business College	25	9	25	8
Kansas City, Mo	National Business College	26	10	22	9
St. Joseph, Mo	Kitner's Commercial College	45	10	28	12
Do	St. Joseph's Commercial College	360	22	28	3
St. Louis, Mo	Jones Commercial College	66	30	25	12
Do	Mound City Commercial College	146	12	67	14
Do	Perkins & Herpel's Mercantile College	73	13	67	3
Hastings, Nebr	Queen City Business College	23	5	23	1
Stromsburg, Nebr	Stromsburg Normal and Business College	168	9	22	3
New Hampton, N. H	New Hampton Literary and Biblical Institute and Commercial College.	63	13	42	24
Jersey City, N. J	Jersey City Business College	104	9	43	3
Newark, N. J	New Jersey Business College	129	14	54	13
Trenton, N. J	The Stewart and Hammond Business College.	150	24	29	6
Do	Trenton Business College	180	13	28	6
Albany, N. Y	Albany Business College	65	32	54	2
Binghamton, N. Y	The Lowell Business College	18	8	23	25
Buffalo, N. Y	Buffalo College of Commerce		21	44	20
Brooklyn, N. Y	St. James's Commercial College	382	35	25	1
Elmira, N. Y	Elmira School of Commerce and Shorthand Institute.	60	20	50	13
Geneva, N. Y	Geneva Business College and Shorthand Institute.	84	8	70	21
Ithaca, N. Y	Wyckoff's Phonographic Institute	115	5	64	
Jamestown, N. Y	Jamestown Business College		17	67	21
New York, N. Y	Manhattan Business College	156	15	38	6
Do	The Paine Uptown Business College	36	8	29	3
Do	Walworth's Business and Stenographic College.	80	33	67	6
Olean, N. Y	Westbrook Commercial College	59	12	50	12
Poughkeepsie, N. Y	Eastman Business College	82	25	24	8
Troy, N. Y	Troy Business College	97	22	21	7
Littleton, N. C	Littleton High School and Business Institute.	270	16	22	4
Canton, Ohio	The Canton Business College	33	10	28	27
Camden, Ohio	Whittaker Shorthand School	60	13	100	
Columbus, Ohio	Columbus Business College	22	23	23	
Findlay, Ohio	Findlay Business College	60	12	52	21
Hopedale, Ohio	Buchanan Business College	122	15	51	5
Mansfield, Ohio	Ohio Business College	23	13	28	16
Toledo, Ohio	Toledo Business College and Shorthand School.	53	40	33	11
Washington, Ohio	Ohio Business University	160	27	33	12
Youngstown, Ohio	Normal Business College	31	13	37	28
Baker City, Oregon	Baker City Normal and Business College	71	10	38	
Portland, Oregon	Portland Business College	38	17	31	7
Allentown, Pa	Allentown Business College	99	11	49	4
Do	American Business College and Modern Office Training School.	128	11	64	6
Altoona, Pa	Mountain City Business College	18	23	23	19
Erie, Pa	Clark's Business College	40	22	33	6
Harrisburg, Pa	Keystone Business College and School of Stenography.	90	6	75	19
Lancaster, Pa	Lancaster Business College	183	27	22	14
Meadville, Pa	Bryant, Stratton, and Smith Business College.	76	19	28	7
Philadelphia, Pa	Pierce College of Business and Shorthand	80	16	50	18
Scranton, Pa	Wood's Business College	148	33	74	14
Wilkesbarre, Pa	Wilkesbarre Business College	27	6	22	22
York, Pa	Bachelder's Business College	58	12	20	
East Greenwich, R. I	Greenwich Business College	92	15	26	3
Providence, R. I	Scholfield's Commercial College	101	25	29	15
Knoxville, Tenn	Knoxville Business College	28	15	29	7
Nashville, Tenn	Goodman's Business College	91	38	35	7
Do	Jennings's Business College	17	8	23	18
Austin, Tex	Capital Business College	72	8	28	9

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ABLE 2.—*Statistics of commercial and business colleges for 1889-90.*—PART III—Continued.

Post-office.	Name.	Average length of course in days.	Average number of pupils to each teacher.	Ratio of average attendance to total number of pupils.	Ratio of graduates to total number of pupils.
1	2	3	4	5	6
				Per ct.	*Per ct.*
ort Worth, Tex	Fort Worth Business College	56	19	28	12
horps Spring, Tex.	Commercial Department, Add Ran University Training School.	189	68	80	6
Vaco, Tex	Hill's Waco Business College	19	18	31	53
Burlington, Vt	Burlington Business College	104	13	52	10
Lyndon Center, Vt	Lyndon Commercial College	116	10	60	27
Richmond, Va	Smithdeal Business College	49	15	49	8
Spokane Falls, Wash.	Spokane Business College	72	10	60	
Wallawalla, Wash	Empire Business College	82	10	47	7
Wheeling, W. Va	Wheeling Business College	37	14	31	13
Chippewa Falls, Wis.	Chippewa Falls Business College and School of Shorthand and Typewriting.	136	20	85	17
Green Bay, Wis	Green Bay Business College	86	9	36	5
Madison, Wis	Northwestern Business College	74	21	62	7
Milwaukee, Wis	Spencerian Business College	69	11	35	

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INSTITUTIONS FOR THE DEFECTIVE AND DEPENDENT CLASSES.

TABLE 1.—*Summary of statistics of public boarding institutions for the deaf, for 1889-90.*

States and Territories.	Number of institutions.	Instructors.				Pupils.							Volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Receipts.	Expenditures.
		Male.	Female.	Total.	Articulation.	Male.	Female.	Total.	Articulation.	Auricular perception.	Graduates in 1889-90.	Graduates since organization.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
United States	48	249	309	558	137	4,246 (44)	3,152	7,442	2,541	181	293	8,096	61,892	$16,010	$9,181,484	$1,894,070	$2,022,244
North Atlantic Division	13	59	141	200	91	1,313 (44)	1,024	2,381	1,368	95	134	6,684	18,340	8,835	2,603,639	673,293	738,472
Massachusetts	1	0	4	4	1	20	8	28	13	0	3	3	400	0	20,000	5,602	4,046
Connecticut	1	6	10	16	4	78	59	137	77	0	.....	.....	2,000	.....	250,000	.....	.....
New York	7	37	81	118	65	800	625	1,425	1,071	95	100	4,331	8,690	4,835	1,328,672	421,452	497,438
New Jersey	1	4	9	13	2	62	56	118	23	0	.....	.....	500	0	100,000	35,872	35,872
Pennsylvania	3	12	37	49	19	353 (44)	276	673	184	0	31	2,350	6,750	4,000	904,967	210,367	211,116
South Atlantic Division	9	45	24	69	9	428	315	743	173	2	37	600	8,515	4,325	1,446,000	225,577	172,888
Maryland	2	10	9	19	2	64	51	115	53	0	4	287	2,430	700	285,000	34,417	31,188
District of Columbia	1	12	2	14	1	99	30	129	30	2	10	.....	3,500	3,000	700,000	64,830	62,436
Virginia	1	7	3	10	1	50	48	98	24	0	0	.....	100	25	200,000	43,000	.....
West Virginia	1	3	2	5	1	36	22	58	20	0	7	78	260	0	70,000	26,330	26,200
North Carolina	1	6	2	8	1	60	66	126	12	0	.....	.....	200	.....	a60,000	a40,000	13,000
South Carolina	1	2	3	5	2	39	35	74	22	0	5	.....	525	.....	55,000	.....	14,288
Georgia	1	4	2	6	0	66	45	111	3	0	1	.....	1,000	600	60,000	17,000	17,274
Florida	1	1	1	2	1	14	8	22	0	0	10	235	500	.....	16,000	.....	8,500
South Central Division	8	40	31	71	7	540	402	942	152	19	19	0	4,747	1,025	988,000	194,479	207,440
Kentucky	1	11	6	17	1	106	70	176	23	0	4	.....	1,660	.....	166,000	40,108	46,540
Tennessee	1	6	4	10	1	91	61	152	18	0	0	0	750	200	150,000	38,000	31,200
Alabama	1	2	4	6	2	80	85	165	16	0	8		500		60,000	10,000	

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Mississippi	1	7	3	10	1	50	48	98	20	8	6	.....	500	.....	200,000	.....	45,049
Louisiana	1	3	2	5	.....	40	39	79	14	.....	.....	.....	200	.....	182,000	58,976	28,079
Texas	2	7	5	12	1	144	88	232	30	0	.....	.....	650	175	90,000	26,838	
Arkansas	1	4	7	11	1	59	61	120	31	11	6	.....	497	650			
North Central Division	12	85	102	187	25	1,760	1,285	3,045	756	48	95	730	28,185	1,825	3,388,845	547,906	568,054
Ohio	1	11	14	25	2	244	227	471	123	0	6	.....	2,014	.....	750,000	84,741	84,741
Indiana	1	8	8	16	1	164	140	304	80	0	13	.....	4,000	1,000	449,600	101,274	101,033
Illinois	1	12	20	32	6	299	209	508	217	0	10	235	12,071	500	500,000	100,000	106,000
Michigan	1	11	13	24	2	165	134	299	40	0	27	282	2,325	125	415,845	57,050	49,800
Wisconsin	1	9	9	18	3	152	74	226	45	0	11	109	1,200	100	105,400	40,000	36,745
Minnesota	1	6	5	11	3	112	85	197	68	10	10	101	1,250	100	225,000	36,041	16,881
Iowa	1	7	9	16	2	164	114	278	24	11	14	.....	1,800	.....	400,000	59,800	59,800
Missouri	1	7	9	16	2	186	111	297	63	0	0	0	1,075	0	250,000	.....	49,054
North Dakota	1	1	0	1	0	10	7	17	0	0	.....	.....	.....	.....	.....	.....	.....
South Dakota	1	3	1	4	1	32	15	47	16	0	1	.....	160	.....	33,000		800
Nebraska	1	4	4	8	2	72	57	129	31	17	0	3	1,100	.....	115,000	25,000	25,000
Kansas	1	6	10	16	1	160	112	272	40	10	4	.....	1,350	.....	178,000	44,000	40,000
Western Division	6	20	11	31	5	205	126	331	92	17	8	82	2,105	0	755,000	252,815	335,390
Colorado	1	5	4	9	1	43	32	75	21	11	0	3	525	0	155,000	a110,000	a110,000
New Mexico	1	1	0	1	0	5	2	7	7	0	0	0	60	.....	.....	1,065	1,065
Utah	1	1	2	3	0	33	12	45	5	0	.....	.....	20	.....	100,000	45,000	37,400
Washington	1	2	1	3	1	20	13	33	8	5	0	0	0	0	40,000	42,000	30,000
Oregon	1	2	1	3	1	13	13	26	11	1	2	79	0	0	12,000	9,000	9,000
California	1	9	3	12	2	91	54	145	40	0	6	.....	1,500	.....	448,000	45,750	147,925

a Includes the blind department.

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TABLE 2.—*Summary of statistics of public day schools for the deaf, for 1889-90.*

States.	Number of institutions.	Instructors.				Pupils.							Volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Receipts.	Expenditures.
		Male.	Female.	Total.	Articulation.	Male.	Female.	Total.	Articulation.	Auricular perception.	Graduates in 1889-90.	Graduates since organization.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
United States	13	7	34	41	27	190	180	370	225	40	6	18	823	$25	$128,500	$27,534	$29,647
North Atlantic Division	3	0	17	17	17	70	78	148	148	31	.....	.....	823	.....	118,500	14,531	15,060
Maine	1	0	7	7	7	24	21	45	45	14	.....	.....	.....	.....	.....	.....	.....
Massachusetts	1	0	9	9	9	41	56	97	97	16	.....	.....	523	.....	118,500	9,842	10,971
Rhode Island	1	0	1	1	1	5	1	6	6	1	.....	.....	300	.....	.....	4,689	4,689
South Central Division	1	1	0	1	0	7	1	8	0	0	1	0	0	0	0	1,212	1,212
Louisiana	1	1	0	1	0	7	1	8	0	0	1	10	0	0	0	1,212	1,212
North Central Division	9	6	17	23	10	113	101	214	77	9	5	8	0	25	10,000	11,791	12,775
Ohio	3	1	4	5	2	19	33	52	22	6	.....	.....	.....	.....	.....	1,225	1,900
Indiana	1	1	1	2	0	24	6	30	0	0	5	5	.....	.....	.....	1,800	1,600
Illinois	1	2	4	6	0	23	24	47	0	0	.....	3	.....	.....	.....	4,475	4,475
Wisconsin	3	1	7	8	8	33	22	55	55	3	0	0	0	25	10,000	4,291	4,800
Missouri	1	1	1	2	0	14	16	30	0	0	0	.....	.....	.....	.....	.....	.....

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TABLE 3.—*Summary of statistics of private schools for the deaf, for 1889-90.*

States.	Number of schools.	Instructors.				Pupils.							Volumes in libraries.	Value of scientific apparatus.	Value of grounds and buildings.	Receipts.	Expenditures.
		Male.	Female.	Total.	Articulation.	Male.	Female.	Total.	Articulation.	Auricular perception.	Graduates in 1889-90.	Graduates since organization.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
United States	15	14	46	60	46	220	272	492	344	46	17	254	4,820	$2,625	$162,000	$17,958	$16,782
North Atlantic Division	5	2	24	26	22	80	125	205	150	32	7	45	1,600	800	87,000	11,322	9,798
Massachusetts	2	0	19	19	15	55	110	165	120	29	3	45	1,600	800	87,000	5,013	3,489
Connecticut	1	1	2	3	3	14	11	25	25	0	4	.....	.....	.....	.....	4,375	4,375
New York	2	1	3	4	4	11	4	16	5	3	.....	.....	.....	.....	.....	1,934	1,934
South Atlantic Division	1	4	3	7	5	14	16	30	30	0	2	25	2,500	1,800	55,000	1,200	.....
Maryland	1	4	3	7	5	14	16	30	30	0	2	25	2,500	1,800	55,000	1,200	.....
North Central Division	9	8	19	27	19	126	131	257	164	14	8	184	720	25	20,000	5,434	6,984
Ohio	2	2	1	3	0	15	16	31	0	0	4	.....	.....	.....	.....	.....	.....
Illinois	2	1	10	11	9	32	37	69	61	5	0	.....	300	.....	.....	.....	.....
Michigan	1	3	0	3	3	22	25	47	46	0	4	74	350	25	20,000	4,506	6,055
Wisconsin	1	2	1	3	2	16	10	26	15	4	0	110	0	0	.....	.....	.....
Minnesota	1	0	3	3	3	22	18	40	30	5	.....	.....	.....	.....	.....	.....	.....
Iowa	1	.....	.....	.....	.....	5	9	14	0	0	0	0	.....	0	0	929	929
Missouri	1	0	4	4	2	14	16	30	12	0	0	0	70	.....	.....	.....	.....

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TABLE 4.—*Statistics of public boarding institutions for the deaf, for 1889-90.*—PART I.

	Post-office.	Name.	Year of first opening.	Controlling body.				Executive.		
				Name.	No.	Term.	By whom appointed.	Name.	Title.	By whom appointed.
	1	2	3	4	5	6	7	8	9	10
1	Talladega, Ala...	Alabama Institution for the Deaf.	1860	Board of commissioners.	8	6 years	Governor and senate.	J. F. Johnson.....	Principal	The board of commissioners.
2	Little Rock, Ark	Arkansas Deaf-Mute Institute..	1867	Board of trustees.	6	2 years	Governor.	Francis D. Clarke...	...do.....	The board of trustees.
3	Berkeley, Cal....	Institution for the Deaf and Dumb and the Blind.	1860	Board of directors.	5	4 years	....do.....	Wm. Wilkinson.....	....do.....	Directors.
4	Colorado Springs, Colo.	Colorado Institution for the Education of the Mute and the Blind.	1874	Board of trustees.	5	6 years	Governor, indorsed by senate.	John E. Ray.....	Superintendent.	Board of trustees.
5	Hartford, Conn..	American Asylum at Hartford for the Education and Instruction of the Deaf and Dumb.	1817	Board of directors.	91	Life...	Board is self-perpetuating.	Job Williams.....	Principal	Board of directors.
6	Washington, D. C.	Columbia Institution for the Deaf and Dumb.	1857	....do.....	11	Life a.	(b)	E. M. Gallaudet, LL. D., PH. D.	President	The corporation.
7	St. Augustine, Fla.	Florida Blind and Deaf-Mute Institute.	1885	Board of managers.	4	4 years	By the people.	Wm. A. Caldwell....	Principal	The board of managers.
8	Cave Spring, Ga.	Georgia Institution for the Education of the Deaf and Dumb.	1846	Board of trustees.	7	Life...	Governor....	Wesley O. Connor...	....do.....	Board of trustees.
9	Jacksonville, Ill.	Illinois Institution for the Education of the Deaf and Dumb.	1846	....do.....	3	6 years	Governor, with approval of senate.	Phillip G. Gillett, A. M., L. S. D.	Superintendent.	Trustees.
10	Indianapolis, Ind.	Indiana Institution for the Education of the Deaf and Dumb.	1844	....do.....	3	4 years	Legislature..	Richard O. Johnson.	....do.....	Board of trustees.
11	Council Bluffs, Iowa.	Iowa Institution for the Deaf and Dumb.	1859	.....	.....	.....	.....	Henry W. Rothert..	....do.....	
12	Olathe, Kans....	Kansas Institution for the Education of the Deaf and Dumb.	1861	Board of trustees of Kansas State charitable institutions.	5	2 years	Governor, approved by the senate.	S. T. Walker, M.A...	....do.....	Board of trustees.
13	Danville, Ky	Kentucky Institute for Deaf-Mutes.	1823	Board of commissioners.	12	6 years	Governor, confirmed by the senate.	W. R. Argo.....	....do.....	Board of commissioners.
14	Baton Rouge, La.	Louisiana Institution for the Education of the Deaf and the Blind.	1852	.....	.....	.....	.....	John Jastrimski	....do	.....

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15	Baltimore, Md. (649 Saratoga st.).	Maryland School for the Colored Blind and Deaf.	1872	Board of trustees	6	1 year	(c)	F. D. Morrison	....do	Board of trustees.
16	Frederick, Md	Maryland School for the Deaf and Dumb.	1868	Board of visitors	35	Life	Governor	Chas. W. Ely	Principal	Board of visitors.
17	Beverly, Mass	New England Industrial School for Deaf-Mutes.	1880	Board of trustees	10	Indefinite.		Nellie H. Swett	....do	Board of trustees.
18	Flint, Mich	Michigan School for the Deaf	1854	....do	3	6 years	Governor	M. T. Gass, M.A.	Superintendent.	Do.
19	Faribault, Minn.	Minnesota School for the Deaf	1863	Board of directors.	7	5 years	Governor, confirmed by the senate.	J. L. Noyes, L.H.D.	....do	Board of directors.
20	Jackson, Miss	Institution for the Education of the Deaf and Dumb.	1854	Board of trustees	5	2 years	Governor, approved by the senate.	J. R. Dobyns	....do	Board of trustees.
21	Fulton, Mo	School for the Deaf and Dumb	1851	Board of commissioners.	5		Governor	James N. Tate	....do	Board of commissioners.
22	Omaha, Nebr	Nebraska Institute for the Deaf and Dumb.	1869	Board of public lands and buildings.	4			J. A. Gillespie, A.M.	Principal	Governor.
23	Chambersburg, near Trenton, N. J.	New Jersey School for Deaf-Mutes.	1883	Board of trustees	11	4 years	Governor, confirmed by the senate.	Weston Jenkins	Superintendent.	Board of trustees.
24	Santa Fe, N. M	New Mexico School for the Deaf and Dumb.	1885	Committee d	3	2 years	Legislature	Lars M. Larson, S. C.	Superintendent	The committee.
25	Buffalo, N. Y. (125 Edward st.).	Le Conteulx St. Mary's Institution for the Improved Instruction of Deaf-Mutes.	1857	Board of trustees	(e)		Self-perpetuating.	Sister Mary Ann Burke	Principal	Board of trustees.
26	Fordham, N. Y.	St. Joseph's Institute for the Improved Instruction of Deaf-Mutes.	1869	Board of managers	7	1 year		Madame Ernstine Nardin.	President	Trustees.
27	Malone, N. Y	Northern New York Institution for Deaf-Mutes.	1884	Board of trustees	15	3 years		Henry C. Rider	Superintendent.	Board of trustees.
28	New York, N. Y. (Lex. av., bet. 67th and 68th sts.).	Institution for the Improved Instruction of Deaf-Mutes.	1867	Association for the Improved Instruction of Deaf-Mutes.	15	3 years	Association	D. Grunberger	Principal	Do.
29	New York, N. Y. (Washington Heights).	New York Institution for the Instruction of the Deaf and Dumb.	1818	Board of directors	24	3 years		Chauncey N. Brainerd, Isaac S. Peet, LL.D.	Superintendent, principal	Do.
30	Rochester, N. Y. (945 N. St. Paul st.).	Western New York Institution for Deaf-Mutes.	1876	Board of trustees	15	Life		Zenas Freeman Westervelt.	Superintendent.	Do.
31	Rome, N. Y	Central New York Institution for Deaf-Mutes.	1875	....do	15	3 years		Edward Beverly Nelson.	Principal	Do.

a Three for the term of one Congress.
b One by the President of the Senate; one by the Speaker of the House of Representatives, and eight by the corporation of the institution.
c President of Maryland School for Blind and Maryland School for Deaf.
d Consists of the attorney-general, auditor, and treasurer of New Mexico.
e Indefinite.

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TABLE 4.—*Statistics of public boarding institutions for the deaf, for 1889-90.*—PART I—Continued.

	Post-office.	Name.	Year of first opening.	Controlling body.				Executive.		
				Name.	No.	Term.	By whom appointed.	Name.	Title.	By whom appointed.
	1	2	3	4	5	6	7	8	9	10
32	Raleigh, N. C	North Carolina Institution for the Deaf and Dumb and the Blind.	1845	Board of trustees	7	6 years	Governor, confirmed by the senate.	W. J. Young	Principal	Board of trustees.
33	Devil's Lake, N. Dak.	School for the Deaf of North Dakota.	1890					A. R. Spear	do	
34	Columbus, Ohio	Ohio Institution for the Education of the Deaf and Dumb.	1829	Board of trustees	5	5 years	Governor	James W. Knott	Superintendent.	Do.
35	Salem, Oregon	Oregon School for Deaf-Mutes	1870	Board of directors	9	6 years	Self-perpetuating.	P. S. Knight	do	Directors.
36	Philadelphia, Pa.	Pennsylvania Institution for the Deaf and Dumb.	1821	do	27	3 years		A. L. E. Crouter, A. M.	Principal	Board of directors.
37	Scranton, Pa	Pennsylvania Oral School for the Deaf.	1883					Emma Garrett	do	Do.
38	Wilkinsburg, Pa.	Western Pennsylvania Institution for the Instruction of the Deaf and Dumb.	1876	Board of trustees	27	3 years	Self-elected	Wm. N. Bent	do	Board of trustees.
39	Cedar Spring, S. C.	South Carolina Institution for the Education of the Deaf and Dumb and the Blind.	1849	Board of commissioners.	5	Indefinite.	Governor	N. F. Walker	do	Board of commissioners.
40	Sioux Falls, S. Dak.	Dakota School for Deaf-Mutes	1880					James Simpson	do	
41	Knoxville, Tenn.	Tennessee Deaf and Dumb School.	1845	Board of trustees	13	Indefinite.	Elected	Thomas L. Moses	do	Board of trustees.
42	Austin, Tex	Deaf, Dumb, and Blind Institution for Colored Youth.	1887					W. H. Holland	Superintendent.	
43	do	Texas Deaf and Dumb Asylum	1857	Board of trustees	5	2 years	Governor	W. A. Kendall	do	Do.
44	Salt Lake City, Utah.	Deaf-Mute Department University of Deseret.	1884	Board of regents	13	2 years	Legislature	Frank W. Metcalf	Principal	Board of regents.
45	Staunton, Va	Virginia Institution for the Education of the Deaf and Dumb and of the Blind.	1839	Board of directors.	9	3 years	Governor	Thomas A. Doyle	do	Board of directors.
46	Vancouver, Wash.	Washington School for Defective Youth.	1886	Board of trustees.	5	5 years	do	James Watson	Director	Board of trustees.
47	Romney, W. Va	West Virginia Schools for the Deaf and the Blind.	1870	Board of regents	7	4 years	do	C. H. Hill	Principal	Board of regents
48	Delavan, Wis	Wisconsin School for the Deaf	1852	Board of supervision.	5	5 years	do	John W. Swiler	Superintendent	Board of supervision.

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TABLE 4.—*Statistics of public boarding institutions for the deaf, for 1889-90.*—PART II.

	Name.	Instructors.			Pupils.						Number of graduates in 1889-90.	Total number of graduates since organization.	Percentage of those leaving institution that are self-supporting.
		Male.	Female.	Articulation.	Male.	Female.	Present Dec. 1, 1889.	Present June 1, 1890.	In articulation.	In auricular perception.			
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Alabama Institute for the Deaf	2	4	2	50	35	85	83	16	0	3	.....	100
2	Arkansas Deaf-Mute Institute	4	7	1	59	61	99	113	31	11	6	.....	100
3	Institution for the Deaf and Dumb and the Blind.	9	3	2	91	54	132	142	40	....	6	.....	100
4	Colorado Institution for the Education of the Mute and the Blind.	5	4	1	43	32	70	72	21	11	0	3	50
5	American Asylum at Hartford for the Education and Instruction of the Deaf and Dumb.	6	10	4	78	59	131	130	77	0	....	.....	100
6	Columbia Institution for the Deaf and Dumb.	12	2	1	99	30	87	85	30	2	10	.....	99
7	Florida Blind and Deaf-Mute Institute	1	1	1	14	8	....	22	....	0	0	0	.....
8	Georgia Institution for the Education of the Deaf and Dumb.	4	2	0	66	45	80	83	3	0	1	.....	.....
9	Illinois Institution for the Education of the Deaf and Dumb.	12	20	6	299	209	497	492	217	....	10	235	100
10	Indiana Institution for the Education of the Deaf and Dumb.	8	8	1	164	140	296	293	80	....	13	.....	95
11	Iowa Institution for the Deaf and Dumb	7	9	2	164	114	269	266	24	11	14	.....	95
12	Kansas Institution for the Education of the Deaf and Dumb	6	10	1	160	112	218	220	40	10	4	.....	95
13	Kentucky Institute for Deaf-Mutes	11	6	1	106	70	168	168	23	0	4	.....	.....
14	Louisiana Institution for the Education of the Deaf and Dumb and the Blind.	3	2	....	40	39	....	....	14	....	....	.....	.....
15	Maryland School for the Colored Blind and Deaf.	4	1	0	16	6	19	20	0	0	3	.....	.....
16	Maryland School for the Deaf and Dumb.	6	8	2	48	45	93	90	53	0	1	259	90
17	New England Industrial School for Deaf-Mutes.	0	4	1	20	8	28	28	13	0	3	3	80
18	Michigan School for the Deaf	11	13	2	165	134	295	285	40	0	27	282	90
19	Minnesota School for the Deaf	6	5	3	112	85	187	186	68	10	10	101	99
20	Institution for the Education of the Deaf and Dumb.	7	3	1	50	48	84	82	20	8	6	.....	.....
21	School for the Deaf and Dumb	7	9	2	186	111	258	245	63	....	0	0	.....
22	Nebraska Institute for the Deaf and Dumb.	4	4	2	72	57	98	98	31	17	0	*a*3	90
23	New Jersey School for Deaf-Mutes	4	9	2	62	56	106	109	23	....	.....	.....	.....
24	New Mexico School for the Deaf and Dumb.	1	0	0	5	2	7	7	0	0	0	0	.....
25	Le Couteulx St. Mary's Institution for the Improved Instruction of Deaf-Mutes.	3	16	10	85	73	142	136	150	8	26	360	90
26	St. Joseph's Institute for the Improved Instruction of Deaf-Mutes.	1	20	19	126	153	257	269	239	52	....	.....	90
27	Northern New York Institution for Deaf-Mutes.	4	2	1	53	36	75	76	29	0	0	0	.....
28	Institution for the Improved Instruction of Deaf-Mutes.	8	11	19	113	99	176	198	212	....	20	513	100
29	The New York Institution for the Instruction of the Deaf-Mutes.	7	8	7	234	116	303	....	250	35	36	3,254	.....
30	Western New York Institution for Deaf-Mutes.	6	14	5	90	75	....	....	171	....	2	13	.....
31	Central New York Institution for Deaf-Mutes.	8	2	4	93	63	156	140	20	....	16	191	95
32	North Carolina Institution for the Deaf, Dumb, and the Blind.	6	2	1	60	66	....	....	12	0	....	.....	85
33	School for the Deaf of North Dakota	1											
34	Ohio Institution for the Education of the Deaf and Dumb.	11	1	2	10	17	....	....	0	0	....	.....	.....
			1	2	244	277	396	380	122	0	6	.....	95
35	Oregon School for Deaf-Mutes	2											
36	Pennsylvania Institution for the Deaf and Dumb.		1	1	13	13	24	00	11	1	2	79	100
					242	188	430	430	114	0	26	2,350	80
37	Pennsylvania Oral School for the Deaf.	1	1	1	13	5	(11)	35	39	11	....	.....	.....

a Fifty others have finished the course of study.
b Term closed April 30, [illegible] pupils present.

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TABLE 4.—*Statistics of public boarding institutions for the deaf, for 1889-90.*—PART II—Continued.

	Name.	Instructors.			Pupils.						Number of graduates in 1889-90.	Total number of graduates since organization.	Percentage of those leaving institution that are self-supporting.
		Male.	Female.	Articulation.	Male.	Female.	Present Dec. 1, 1889.	Present June 1, 1890.	In articulation.	In auricular perception.			
	1	2	3	4	5	6	7	8	9	10	11	12	13
38	Western Pennsylvania Institution for the Instruction of the Deaf and Dumb	4	6	1	111	88	170	156	26	0	5	.....	75
39	South Carolina Institution for the Education of the Deaf and Dumb and the Blind.	2	3	2	39	35	....	63	22	0	5	.....	.....
40	Dakota School for Deaf-Mutes*	3	1	1	32	15	....	....	16	....	1	.....	.....
41	Tennessee Deaf and Dumb School.....	6	4	1	91	61	150	146	18	0	....	.....	99
42	Deaf, Dumb, and Blind Institution for Colored Youth.	....	2	0	24	12	37	37	0	0	0	0	0
43	Texas Deaf and Dumb Asylum.....	7	3	1	120	76	161	156	30	....	....	.....	80
44	Deaf-Mute Department, University of Deseret.	1	2	....	33	12	....	....	5	....	....	.....	100
45	Virginia Institution for the Education of the Deaf and Dumb and of the Blind.	7	3	1	50	48	95	96	24	0	0	.....	90
46	Washington School for Defective Youth.	2	1	1	20	13	32	32	8	5	0	0	.....
47	West Virginia School for the Deaf and the Blind.	3	2	1	36	32	66	65	29	0	7	78	75
48	Wisconsin School for the Deaf.....	9	9	3	152	74	183	183	45	0	11	109	100

*Statistics of 1888-89.

NOTE EXPLANATORY OF TABLE ON FOLLOWING PAGES.

NOTE.—I. *The Manual Method.*—The sign language, the manual alphabet, and writing are the chief means used in the instruction of the pupils.

II. *The Oral Method.*—Articulation and speech-reading, together with writing, are made the chief means of instruction, and facility in articulation and speech-reading, as well as mental development and written language, is aimed at. Signs are used as little as possible, and the manual alphabet is generally discarded altogether. There is a difference in different schools in the extent to which the use of natural signs is allowed in the early part of the course, and also in the prominence given to writing as an auxiliary to articulation and speech-reading in the course of instruction.

III. *The Combined System.* Articulation and speech-reading are regarded as very important, but mental development and the acquisition of language are regarded as still more important.

A. The general instruction of the pupils is carried on chiefly by the manual method. Part of them receive special training in articulation and speech-reading.

AB. Part of them are taught by the manual method, others by the oral method. Of the former, part receive special training in articulation and speech-reading. All are permitted to mingle freely with one another out of school hours.

AE. The general instruction of the pupils is carried on chiefly by the manual method. Part of them receive special training in articulation and speech-reading. Some of the teachers also use articulation and speech-reading in addition to the manual alphabet and writing as a means of instruction with part of their pupils.

B. Some of the pupils are taught by means of the manual method and others by the oral method. These two classes are permitted to mingle freely with one another out of school hours.

BC. Some of the pupils are taught by means of the manual method, and others by the oral method. Of the latter, part are permitted to mingle freely out of school hours with the manually taught pupils; others are kept entirely separate from them and from those who mingle with them out of school hours as well as in the schoolrooms.

C. Some of the pupils are taught by means of the manual method and others by the oral method. These two classes are kept entirely separate out of school hours as well as in the schoolrooms.

D. The general instruction of the pupils is carried on chiefly by means of the manual alphabet and writing without the use of the sign language. All the pupils receive special training in articulation and speech-reading.

E. The sign language, the manual alphabet, writing, articulation, and speech-reading are all used as means of instruction by the same teachers and with the same pupils.

F. In addition to one or more of the methods above described, auricular training is given to a part of the pupils.

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TABLE 4.—*Statistics of public boarding institutions for the deaf, for 1889-90.*—PART III.

	Name.	Primary department.				Academic department.							Industrial department.										Method of instruction. (See Note p. 1640.)
		Spelling.	Reading.	Writing.	Arithmetic.	English language and literature.	Arithmetic, higher.	Algebra.	Geometry.	Physics.	Chemistry.	History, general.	Carpentry.	Cabinetmaking.	Shoemaking.	Tailoring.	Printing.	Farming.	Weaving.	Cooking.	Sewing.	Other trades.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Alabama Institute for the Deaf	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	0	.....	0	.....	.....	.....	.....	15	Manual and oral.
2	Arkansas Deaf-Mute Institute	.....	.....	120	120	.....	.....	.....	.....	.....	.....	.....	0	.....	17	.....	15	.....	.....	1	.....	38	Combined A. B. F.
3	Institution for the Deaf and Dumb and the Blind.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....	10	.....	.....	.....	.....	.....	Combined AE.
4	Colorado Institution for the Education of the Mute and the Blind.	51	23	51	35	13	13	0	0	5	0	5	8	.....	0	.....	13	.....	.....	.....	.....	.....	Combined AB. F.
5	The American Asylum at Hartford for the Education and Instruction of the Deaf and Dumb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23	18	19	.....	.....	.....	.....	.....	.....	Combined A.
6	The Columbia Institution for the Deaf and Dumb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	Combined AE.
7	Florida Blind and Deaf-Mute Institute.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Combined B.
8	Georgia Institution for the Education of the Deaf and Dumb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65	.....	.....	.....	.....	.....	.....	.....	Combined A.
9	Illinois Institution for the Education of the Deaf and Dumb.	453	453	453	363	55	55	.....	.....	.....	.....	55	20	.....	40	.....	19	.....	.....	.....	.....	66	Combined A. AB. AE. E. F.
10	The Indiana Institution for the Education of the Deaf and Dumb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45	.....	15	.....	20	8	.....	.....	.....	69	Combined AE.
11	The Iowa Institution for the Deaf and Dumb.	278	278	278	252	0	15	0	0	15	0	104	76	0	24	0	36	24	0	0	60	12	Combined B. F.
12	The Kansas Institution for the Education of Deaf and Dumb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38	.....	20	.....	20	.....	.....	.....	.....	.....	Combined A. AB. AE.
13	Kentucky Institute for Deaf-Mutes.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	15	.....	15	.....	.....	.....	30	6	Combined A. E.
14	Louisiana Institution for the Deaf and Dumb and the Blind.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Combined.
15	Maryland School for the Colored Blind and Deaf.	22	22	22	22	.....	2	.....	.....	.....	.....	4	.....	.....	8	.....	0	.....	.....	.....	6	10	Manual.
16	Maryland School for the Deaf and Dumb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	22	.....	6	.....	.....	.....	.....	.....	Combined AB. AE.
17	New England Industrial School for Deaf-Mutes.	18	.....	28	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....	Combined.

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TABLE 4.—*Statistics of public boarding institutions for the deaf, for 1889-90.*—PART III—Continued.

Name.	Primary department.				Academic department.							Industrial department.										Method of Instruction. (See Note p. 1640.)
	Spelling.	Reading.	Writing.	Arithmetic.	English language and literature.	Arithmetic, higher.	Algebra.	Geometry.	Physics.	Chemistry.	History general.	Carpentry.	Cabinetmaking.	Shoemaking.	Tailoring.	Printing.	Farming.	Weaving.	Cooking.	Sewing.	Other trades.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
18 Michigan School for the Deaf	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37	.....	19	.....	19	3	.....	.....	35	4	Combined AB.
19 Minnesota School for the Deaf	0	0	85	85	.....	3	2	0	0	0	35	6	.....	17	46	17	.....	.....	.....	70	.....	Combined. (a)
20 Institution for the Education of the Deaf and Dumb	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	*	5	.....	.....	.....	.....	.....	Combined A. F.
21 School for the Deaf and Dumb	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38	.....	35	.....	35	.....	.....	.....	.....	.....	Combined AB.
22 Nebraska Institute for the Deaf and Dumb	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	.....	0	.....	15	.....	.....	.....	.....	5	Combined B. F.
23 New Jersey School for Deaf-Mutes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	13	.....	10	.....	.....	.....	.....	10	Combined AE.
24 New Mexico School for the Deaf and Dumb	7	7	7	7	.....	.....	.....	.....	.....	.....	.....	0	0	0	0	0	0	0	0	0	.....	Manual.
25 Le Couteulx St. Mary's Institution for the Improved Instruction of Deaf-Mutes.	b99	70	90	70	.....	.....	1	.....	2	.....	2	2	.....	4	13	13	.....	.....	27	55	36	Combined AB. F.
26 St. Josephs Institute for the Improved Instruction of Deaf-Mutes.	b155	124	155	155	.....	.....	.....	.....	.....	.....	.....	1	.....	14	15	14	.....	.....	.....	153	1	Oral C.
27 Northern New York Institution for Deaf-Mutes.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	14	7	0	.....	.....	.....	.....	.....	Combined A.
28 Institution for the Improved Instruction of Deaf-Mutes.	212	212	212	212	.....	16	0	47	47	16	60	48	.....	.....	.....	.....	.....	.....	18	96	72	Oral.
29 The New York Institution for the Instruction of the Deaf and Dumb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	30	21	26	28	.....	.....	.....	76	9	Combined E. F.
30 Western New York Institution for Deaf-Mutes.	.....	.....	171	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	0	.....	19	.....	.....	7	7	12	Combined D. F.
31 Central New York Institution for Deaf-Mutes.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	30	.....	15	.....	.....	.....	.....	.....	Combined A.
32 North Carolina Institution for the Deaf and Dumb and the Blind.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	0	.....	.....	.....	.....	.....	Manual, oral.
33 School for the Deaf of North Dakota.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Manual.
34 Ohio Institution for the Education of the Deaf and Dumb.	471	471	471	471	.....	.....	.....	.....	.....	.....	.....	37	.....	44	42	48	.....	.....	.....	89	3	Combined A.

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																	2						Combined A. E.
35	Oregon School for Deaf-Mutes											16		55	65	25			20	140	26	The manual, the oral.
36	The Pennsylvania Institution for the Deaf and Dumb.											28								8		Oral.
37	Pennsylvania Oral School for the Deaf.																					
38	Western Pennsylvania Institution for the Instruction of the Deaf and Dumb.	174	174	174	174							18		22		8						Combined A.
39	South Carolina Institution for the Education of the Deaf and Dumb and the Blind.													7		6						Combined AB.
40	Dakota School for Deaf-Mutes																					
41	Tennessee Deaf and Dumb School													20		18						The manual, the combined A. AE. B.
42	Deaf, Dumb, and Blind Institute for Colored Youth.	37	37	37	22									9						9		Manual.
43	Texas Deaf and Dumb Asylum											4		13		16					44	The manual, the combined A.
44	Deaf-Mute Department, University of Deseret.	45	45	45	45							6		4		5						Combined E.
45	The Virginia Institution for the Education of the Deaf and Dumb and of the Blind.											8		5	4	6						Combined A., AE.
46	Washington School for Defective Youth.																					Combined E.
47	West Virginia Schools for the Deaf and the Blind.	45		45	40	17	17	0	0	0	0	3		8	14	8						Combined A.
48	Wisconsin School for the Deaf											19		42		17					4	Combined A., B.

a With the exception of D.

b Ninety-nine in language.

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TABLE 4.—*Statistics of public boarding institutions for the deaf, for 1889-90.*—PART IV.

	Name.	Volumes in library.	Annual cost per capita of pupil.	Value of scientific apparatus.	Value of grounds and buildings.	Receipts.		Expenditures.	
						State, county, or municipal appropriations.	Other sources.	Buildings and improvements.	For support.
	1	2	3	4	5	6	7	8	9
1	Alabama Institution for the Deaf.	500	$218	.....	$75,000	$20,000	$100	$500	$18,000
2	Arkansas Deaf-Mute Institute.	497	196	$650	90,000	26,838	.....	6,297	21,722
3	Institution for the Deaf and Dumb and the Blind.	1,500	.....	.....	a148,000	a45,750	.....	a102,000	a45,225
4	Colorado Institution for the Education of the Mute and the Blind.	525	275	.....	a155,000	a110,000	.....	a90,000	a20,000
5	American Asylum at Hartford for the Education and Instruction of the Deaf and Dumb.	2,000	.....	.....	250,000	.....	.....	.....	.....
6	Columbia Institution for the Deaf and Dumb.	3,500	465	3,000	700,000	b57,532	7,298	2,421	60,017
7	Florida Blind and Deaf-Mute Institute.	.....	.....	.....	a16,000	.....	.....	a3,500	a5,000
8	Georgia Institution for the Education of the Deaf and Dumb.	1,000	.....	600	60,000	17,000	0	.....	17,274
9	Illinois Institution for the Education of the Deaf and Dumb.	12,071	200	500	500,000	100,000	.....	5,000	100,000
10	Indiana Institution for the Education of the Deaf and Dumb.	4,000	197	1,000	449,600	101,034	240	46,034	54,999
11	Iowa Institution for the Deaf and Dumb.	.....	.....	.....	.....	59,800	.....	.....	59,800
12	Kansas Institution for the Education of the Deaf and Dumb.	1,350	200	.....	178,000	44,000	.....	40,000	.....
13	Kentucky Institution for Deaf-Mutes.	1,650	c213	.....	166,000	37,185	2,923	8,763	36,777
14	Louisiana Institution for the Education of the Deaf and Dumb and the Blind.	200	.....	.....	200,000	.....	.....	.....	22,000
15	Maryland School for the Colored Blind and Deaf-Mutes.	130	232	.....	a35,000	a7,000	a2,317	a703	a7,194
16	Maryland School for the Deaf and Dumb.	2,300	250	700	250,000	25,000	100	.....	23,994
17	New England Industrial School for Deaf-Mutes.	400	.....	0	20,000	2,000	3,602	.....	4,046
18	Michigan School for the Deaf.	2,325	189	125	415,845	57,000	50	800	49,000
19	Minnesota School for the Deaf.	1,250	188	100	225,000	36,041	.....	1,031	15,859
20	Institution for the Deaf and Dumb.	500	.....	.....	125,000	.....	15,472	.....	15,472
21	School for the Deaf and Dumb.	1,075	225	.....	250,000	.....	.....	167,000	59,250
22	Nebraska Institute for the Deaf and Dumb.	1,100	194	100	115,000	25,000	.....	5,000	20,000
23	New Jersey School for Deaf-Mutes.	500	304	.....	100,000	*33,340	.....	.....	*33,340
24	New Mexico School for the Deaf and Dumb.	60	89	0	0	880	185	.....	1,065
25	Le Couteulx St. Mary's Institution for the Improved Instruction of Deaf-Mutes.	660	216	0	153,000	.....	29,237	175	28,530
26	St. Joseph's Institution for the Improved Instruction of Deaf-Mutes.	650	.....	.....	262,943	.....	119,091	47,987	70,373
27	Northern New York Institution for Deaf-Mutes	80	253	35	65,000	41,731	2,547	21,707	22,477
28	Institution for the Improved Instruction of Deaf-Mutes.	850	.....	800	166,729	51,757	1,526	6,920	47,421
29	The New York Institution for the Instruction of the Deaf and Dumb.	4,650	313	3,500	456,000	87,175	4,455	4,683	94,001

* Statistics of 1888-89.
a Includes the blind department.
b From United States.
c Exclusive of improvements and real estate.

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TABLE 4.—*Statistics of public boarding institutions for the deaf, for 1889-90.*—PART IV—Continued.

	Name.	Volumes in library.	Annual cost per capita.	Value of scientific apparatus.	Value of grounds and buildings.	Receipts. State, county, or municipal appropriations.	Receipts. Other sources.	Expenditures. Buildings and improvements.	Expenditures. For support.
	1	2	3	4	5	6	7	8	9
30	Western New York Institution for Deaf-Mutes.	1,500	$269	$500	$100,000	$42,118	$1,330	$3,145	$37,721
31	Central New York Institution for Deaf-Mutes.	300	283	.....	125,000	28,480	12,005	1,832	38,633
32	North Carolina Institution for the Deaf and Dumb and the Blind.	1,800	200	.....	*a*60,000	*a*40,000	.....	.....	*a*13,000
33	School for the Deaf of North Dakota.	.....	.....	.....	.....	.....	.....	.....	.....
34	Ohio Institution for the Education of the Deaf and Dumb.	2,014	180	.....	750,000	84,731	.....	3,634	81,107
35	Oregon School for Deaf-Mutes.	0	270	0	12,000	9,000	.....	2,000	7,000
36	Pennsylvania Institution for Deaf and Dumb.	6,000	251	4,000	650,000	96,000	25,000	6,500	101,500
37	Pennsylvania Oral School for the Deaf.	.....	231	.....	65,000	34,360	420	59,352	8,760
38	Western Pennsylvania Institution for the Instruction of the Deaf and Dumb.	750	213	.....	189,967	44,200	10,387	.....	34,904
39	South Carolina Institution for the Education of the Deaf and Dumb and the Blind.	525	153	.....	55,000	.....	.....	1,100	13,188
40	Dakota School for Deaf-Mutes.*	160	.....	.....	.....	33,000	.....	800	.....
41	Tennessee Deaf and Dumb School.	750	212	200	150,000	33,000	.....	5,500	26,300
42	Deaf, Dumb, and Blind Institute for Colored Youth.	.....	144	50	*a*32,000	*a*16,500	.....	*a*1,333	*a*5,258
43	Texas Deaf and Dumb Asylum.	650	148	125	150,000	42,476	.....	4,753	33,705
44	Deaf-Mute Department, University of Deseret.	20	200	.....	100,000	45,000	.....	35,000	2,400
45	Virginia Institution for the Education of the Deaf and Dumb and of the Blind.	100	.....	25	*a*200,000	*a*35,000	*a*800	.....	.....
46	Washington School for Defective Youth.	.....	.....	.....	40,000	*b*42,000	.....	.....	30,000
47	West Virginia Schools for the Deaf and the Blind.	789	260	0	*a*70,000	*a*24,700	*a*1,930	0	*a*26,200
48	Wisconsin School for the Deaf.	1,200	.....	100	105,000	40,000	.....	.....	.....

*Statistics of 1888-89. *a* includes the blind department. *b* For State beneficiaries.

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TABLE 5.—*Character of defect and age at which it appeared.*

	Post-office.	Name.	Age of admission.	Cases in which deafness occurred under two years of age.	Over two years of age.	Date of deafness unknown.	Number of
	1	2	3	4	5	6	7
1	Talladega, Ala	The Alabama Institution for the Deaf	a8				
2	Little Rock, Ark	Arkansas Deaf-Mute Institute	9-30	75	30	6	5
3	Berkeley, Cal	Institution for the Deaf and Dumb and the Blind.	7-18				
4	Colorado Springs	Colorado Institution for the Education of the Mute and the Blind.	4-22	43	27	5	24
5	Hartford, Conn	The American Asylum at Hartford for the Education and Instruction of the Deaf and Dumb.	8-24				
6	Mystic Bridge, Conn.	Whipple's Home School for the Deaf	5	22	3	22	3
7	Washington, D. C	The Columbia Institution for the Deaf and Dumb.	7				
8	St. Augustine, Fla	Florida Blind and Deaf-Mute Institute	6-21				
9	Cave Spring, Ga	Georgia Institution for the Education of the Deaf and Dumb.	8-27				
10	Chicago, Ill	Chicago Deaf-Mute Day School	6-21				
11	do	Ephpheta School for the Deaf		24	15	8	7
12	Englewood, Ill	Voice and Hearing School for the Deaf		19	2	12	2
13	Jacksonville, Ill	Illinois Institution for the Education of the Deaf and Dumb.	8	254	254		22
14	Evansville, Ind	Evansville Indiana School for the Deaf	7-25	25	5	6	6
15	Indianapolis, Ind	The Indiana Institution for the Education of the Deaf and Dumb.	8-21				
16	Council Bluffs, Iowa	The Iowa Institution for the Deaf and Dumb	(b)				
17	Dubuque, Iowa	Eastern Iowa School for the Deaf	7-25	13			1
18	Olathe, Kans	The Kansas Institution for the Education of the Deaf and Dumb.	8-21				
19	Danville, Ky	Kentucky Institute for Deaf-Mutes	9				
20	Baton Rouge, La	Louisiana Institution for the Deaf and Dumb and the Blind.					
21	New Orleans, La	New Orleans Free Public School for Deaf-Mutes.	5	5	3		0
22	Portland, Me	Portland School for the Deaf	(b)				14
23	Baltimore, Md	F. Knapp's Institute	6				
24	do	Maryland School for Colored Blind and Deaf.	7	10	5	3	4
25	Frederick, Md	Maryland School for the Deaf and Dumb	7	64	27	2	1
26	Beverly, Mass	New England Industrial School for Deaf Mutes.	7	8	20	0	8
27	Boston, Mass	The Horace Mann School for the Deaf	5	50	22	9	16
28	Northampton, Mass.	Clarke Institution for Deaf Mutes	(b)	60	47	8	11
29	West Medford, Mass.	The Sarah Fuller Home for Little Deaf Children.	(c)	12	1		0
30	Flint, Mich	Michigan School for the Deaf	9-20	152	217	31	
31	Norris, Mich	Evangelical Lutheran Deaf and Dumb Asylum.	8	6	20	9	21
32	Faribault, Minn	Minnesota School for the Deaf	8	126	63	12	30
33	St. Paul, Minn	Institute for Deaf-Mutes	5	12	22	2	5
34	Jackson, Miss	Institution for the Education of the Deaf and Dumb.	8				
35	Fulton, Mo	School for the Deaf and Dumb	8				
36	St. Louis, Mo	Maria Consilia Deaf-Mute Institute	8		13	15	2
37	do	St. Louis Day School for the Deaf	6	1	29		0
38	Omaha, Nebr	Nebraska Institute for the Deaf and Dumb	7-25				
39	Chambersburg (near Trenton), N. J.	The New Jersey School for Deaf-Mutes	8				
40	Santa Fe, N. Mex	New Mexico School for the Deaf and Dumb	8-17	5	2		0
41	Albany, N. Y	Albany Home School for the Deaf		5	4	4	1
42	Buffalo, N. Y	Le Couteulx St. Mary's Institution for the Improved Instruction of Deaf-Mutes.	6	145	13	0	8
43	Fordham, N. Y	St. Joseph's Institute for the Improved Instruction of Deaf-Mutes.	6	171	108	28	57
44	Malone, N. Y	Northern New York Institution for Deaf-Mutes.	6	55	62		14

a And over. *b* Not limited. *c* Under 5.

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TABLE 5.—*Character of defect and age at which it appeared*—Continued.

	Post-office.	Name.	Age of admission.	Cases in which deafness occurred under two years of age.	Over two years of age.	Date of deafness unknown.	Semi-deaf.
	1	2	3	4	5	6	7
45	New York, N. Y	Institution for the Improved Instruction of Deaf-Mutes.	6-20	139	50	2	...
46	....do	Miss Keeler's Private Articulation Class for Deaf-Mutes.	5	.....	1	9	1
47	New York (Washington Heights), N. Y.	The New York Institution for the Instruction of the Deaf and Dumb.	6	.....	....	....	..
48	Rochester, N. Y	Western New York Institution for Deaf-Mutes.	a6	96	65	10	13
49	Rome, N. Y	Central New York Institution for Deaf-Mutes.	6	.....	....	....	...
50	Raleigh, N. C	North Carolina Institution for the Deaf and Dumb and the Blind.	8	54	....	....	...
51	Devils Lake, N. Dak.	School for the Deaf of North Dakota	.....	.....	....	....	...
52	Cincinnati, Ohio	Cathedral School for the Deaf	6-21	.....	....	....	...
53	....do	Day School for Deaf-Mutes	6	.....	....	....	...
54	....do	Cincinnati Oral School for the Deaf	6	9	13	0	4
55	....do	Springer Institute	.....	.....	....	....	...
56	Columbus, Ohio	The Ohio Institution for the Education of the Deaf and Dumb.	8	.....	....	....	...
57	Toledo, Ohio	Toledo Deaf-Mute School	.....	.....	....	....	...
58	Salem, Oregon	Oregon School for Deaf-Mutes	7-21	14	13	0	2
59	Philadelphia, Pa	The Pennsylvania Institution for the Deaf and Dumb.	8-21	138	268	8	16
60	Scranton, Pa	Pennsylvania Oral School for the Deaf	6	38	26	....	3
61	Wilkensburg, Pa	Western Pennsylvania Institution for the Instruction of the Deaf and Dumb.	8	87	92	19	1
62	Providence, R. I	Rhode Island Day School for the Deaf	.....	13	6	7	7
63	Cedar Spring, S. C	South Carolina Institution for the Education of the Deaf and Dumb and the Blind.	10	.....	....	....	...
64	Sioux Falls, S. Dak.	Dakota School for Deaf-Mutes	.....	.....	....	....	...
65	Knoxville, Tenn	Tennessee Deaf and Dumb School	8	.....	....	....	...
66	Austin, Tex	Deaf, Dumb, and Blind Institution for Colored Youth.	7-21	20	17	....	1
67	....do	Texas Deaf and Dumb Asylum	9-20	149	105	13	6
68	Salt Lake City, Utah	Deaf-Mute Department, University of Deseret.	8-21	6	15	20	4
69	Staunton, Va	The Virginia Institution for the Education of the Deaf and Dumb and of the Blind.	7-21	92	6	0	6
70	Vancouver, Wash	Washington School for Defective Youth	6	15	13	5	6
71	Romney, W. Va	West Virginia Schools for the Deaf and the Blind.	8	48	14	6	7
72	Delavan, Wis	Wisconsin School for the Deaf	8	.....	....	....	...
73	La Crosse, Wis	Public School for the Deaf	4	1	4	1	1
74	Milwaukee, Wis	Milwaukee Day School for the Deaf	9	28	12	....	1
75	St. Francis Station, Wis.	St. John's Catholic Deaf-Mute Institution	a8	10	12	1	3
76	Wausau, Wis	Wausau Day School for the Deaf	.....	.....	....	....	...

a And over.

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TABLE 6.—*Statistics of public day schools for the deaf, for 1889-90*—PART I.

	Post-office.	Name.	Year of first opening.	Controlling body.				Executive.		
				Name.	No.	Term.	By whom appointed.	Name.	Title.	By whom appointed.
	1	2	3	4	5	6	7	8	9	10
1	Chicago, Ill	Chicago Deaf-Mute Day Schools	1875	City board of education.	....	.....	.....	Philip A. Emery, M. A.	Principal	Board of education.
2	Evansville, Ind	Evansville, Ind., School for the Deaf.	1886	Board of trustees.	3	3 years	City council.	Charles Kernesy, B. A.	....do	Board of trustees.
3	New Orleans, La	New Orleans Free Public School for Deaf-Mutes.	1886	Public schools.	....	.....	.....	R. B. Lawrence	....do	
4	Portland, Me	Portland School for the Deaf	1876	.....	....	.....	.....	Miss Ellen L. Barton.	....do	School board.
5	Boston (163 Warrent st.), Mass.	Horace Mann School for the Deaf.	1869	City school board	....	.....	.....	Miss Sarah Fuller.	....do	Do.
6	St. Louis, Mo	St. Louis Day School for the Deaf.	1879	City board	....	.....	.....	R. P. McGregor	....do	Do.
7	Cincinnati, Ohio	Day School for Deaf-Mutes	1875	F. C. Yunestein	3	1 year	Pres. board of education.	Caroline Fesenbeck.	....do	Cincinnati board of education.
8	....do	Cincinnati Oral School for the Deaf.	1886	Executive committee.	5	1 year	Society	Virginia A. Osborn.	....do	Elected.
9	Toledo, Ohio	Toledo Deaf-Mute School	1890	.....	....	.....	Governor	Alfred F. Wood	....do	
10	Providence, R. I	Rhode Island Day School for the Deaf.	1877	State board of education.	5	Indefinite.	Elected by common council.	Laura De L. Richards.	....do	State board of education.
11	La Crosse, Wis	Public School for the Deaf	1885	Board of education	7	2 years.	.....	Albert Hardy	Superintendent of public schools.	Board of education.
12	Milwaukee, Wis	Milwaukee Day School for the Deaf.	1883	School board and State superintendent of education.	....	.....	.....	Paul Binner	Principal	School board and State superintendent of education.
13	Wausau, Wis	Wausau Day School for the Deaf.	1890	.....	....	.....	.....	Miss Edith E. Brown.	Teacher	

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TABLE 6.—*Statistics of public day schools for the deaf, for 1889-90.*—PART II.

	Name.	Method of instruction.	Instructors.			Pupils.						Receipts.		Expenditures.	
			Male.	Female.	Articulation.	Male.	Female.	Present Dec. 1, 1889.	Present June 1, 1890.	In articulation.	In auricular perception.	State or municipal appropriations.	Other sources.	Buildings and improvements.	For support.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Chicago Deaf-Mute Day School	Combined, A	2	4	.....	23	24	.....	41	.....	0	.....	.....	.....	$4,475
2	Evansville, Ind., School for the Deaf	Manual	1	1	.....	24	6	30	30	0	0	$1,800	.....	.....	1,600
3	New Orleans Free Public School, Deaf-Mute	do	1	0	0	7	1	8	8	0	0	.....	.....	.....	734
4	Portland School for the Deaf	Oral	0	7	7	24	21	45	45	45	14	.....	.....	.....	.....
5	Horace Mann School for the Deaf	do	0	9	9	41	56	91	92	97	16	a9,842	.....	$464	10,506
6	St. Louis Day School for the Deaf	Manual	1	1	0	14	16	29	26	0	0	.....	.....	.....	.....
7	Day School for Deaf-Mutes	do	0	1	0	7	6	12	12	0	0	.....	.....	.....	700
8	Cincinnati Oral School for the Deaf	Oral	0	3	2	7	15	21	20	22	6	1,225	.....	.....	1,200
9	Toledo Deaf-Mute School	Manual	1	0	0	5	12	.....	.....	0	.....	.....	.....	.....	.....
10	Rhode Island Day School for the Deaf	Oral	0	4	4	12	21	30	33	33	8	4,689	.....	.....	4,689
11	Public School for the Deaf	do	0	1	1	5	1	6	6	6	1	491	.....	.....	550
12	Milwaukee Day School for the Deaf	do	1	5	6	22	19	38	37	41	2	3,800	.....	.....	4,250
13	Wausau Day School	do	0	1	1	6	2	.....	.....	8	.....	.....	.....	.....	.....

a From the State for its "beneficiaries." No separate appropriation by the city.

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TABLE 7.—*Statistics of private schools for the deaf and dumb, for 1889-90.*—PART I.

	Post-office.	Name.	Year of first opening.	Chief executive officer.	Method of instruction.	Industries taught.	How supported.
	1	2	3	4	5	6	7
1	Mystic Bridge, Conn.	Whipple's Home School for the Deaf	1869	Mrs. Margaret Hammond.	Oral	Dressmaking, housekeeping, tailoring.	Tuition fees, State and town.
2	Chicago, Ill	Ephpheta School for the Deaf	1884	Mary C. Hendrick	Combined, E	Sewing, modeling, wood-carving.	Ephpheta Society.
3	Englewood, Ill	Chicago Voice and Hearing School for the Deaf.	1882	Mary T. McCowan	Oral	Drawing, painting, clay modeling, sloyd.	Tuition fees.
4	Dubuque, Iowa	Eastern Iowa School for the Deaf	1888	De Coursey French	Manual	None	
5	Baltimore, Md	F. Knapp English and German Institute	1878	F. Knapp	Oral	do	Tuition fees and State.
6	Northampton, Mass.	Clark Institution for Deaf-Mutes	1867	Caroline A. Yale	do	Carpentry, wood-carving.	
7	West Medford, Mass.	Sarah Fuller Home for Little Deaf Children.	1888	Eliza L. Cark	do	None	Tuition fees and contributions.
8	Norris, Mich	Evangelical Lutheran Institution for Deaf and Dumb.	1873	D. F. Uhlig	do	do	Tuition fees and Lutheran congregation.
9	St. Paul, Minn	Institute for Deaf-Mutes	1886	Miss Nardin	Combined, A, B	do	
10	St. Louis, Mo	Maria Consilia Deaf-Mute Institute	1885	Sister M. Adelina	do	Dressmaking, sewing, fancy work.	Tuition fees and contributions.
11	Albany, N. Y	Albany Home School for the Deaf	1889	Anna M. Black	Oral	None	Tuition fees.
12	New York, N. Y. (27 E. 46th st.).	Miss Keeler's Articulation Class for Deaf-Mutes.	1885	Sarah Warren Keeler.	do	do	Do.
13	Cincinnati, Ohio	Cathedral School for the Deaf	1887	E. P. Cleary	Manual	do	Tuition fees and archbishop.
14	do	Springer Institute	1888	John M. Mackey			
15	St. Francis, Wis	St. John's Catholic Deaf-Mute Institute	1876	Rev. M. A. Gerard	Combined	Shoemaking, wood-carving.	Voluntary contributions and tuition fees.

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TABLE 7.—*Statistics of private schools for the deaf and dumb, for 1889-90*—PART II.

	Name.	Instructors.			Pupils.						Number of graduates in 1889-90.	Total number of graduates since organization.	Percentage of those leaving institutions that are self-supporting.	Receipts.		Expenditures.	
		Male.	Female.	Articulation.	Male.	Female.	Present, Dec. 1, 1889.	Present, June 1, 1890.	In articulation.	In auricular perception.				State, county, or municipal appropriations.	Other sources.	Buildings and improvements.	For support.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Whipple's Home School for the Deaf	1	2	3	14	11	19	23	25	0	4	------	100	$4,375	------	------	------
2	Ephpheta School for the Deaf	------	4	3	20	27	41	43	40	0	0	0	------	------	------	------	------
3	Chicago Voice and Hearing School for the Deaf	1	6	6	12	10	20	20	21	5	------	------	------	------	------	------	------
4	Eastern Iowa School for the Deaf	1	0	0	5	9	12	12	0	0	0	0	------	------	$929	------	$929
5	F. Knapp English and German Institute	4	3	5	14	16	32	30	32	0	2	25	100	a1,200	0	------	------
6	*Clarke* Institution for Deaf-Mutes	------	16	13	56	51	99	102	107	29	0	40	98	------	------	------	------
7	*Sarah Fuller* Home for Little Deaf Children	------	3	2	9	4	11	10	13	------	3	5	0	------	5,013	$214	3,275
8	*Evangelical* Lutheran Deaf and Dumb Asylum	3	0	3	22	25	47	47	46	0	7	74	67	------	4,505	2,165	3,890
9	Institute for Deaf-Mutes	0	3	3	22	18	37	37	30	5	------	------	------	0	------	------	------
10	Maria Consilia Deaf-Mute Institute	0	4	2	14	10	30	32	12	0	0	0	------	------	------	------	------
11	Albany Home School for the Deaf	0	2	2	3	2	2	4	5	3	------	------	------	------	1,934	------	------
12	Miss Keeler's Private Articulation Class for Deaf-Mutes	1	1	2	3	2	2	2	------	------	------	------	------	------	------	------	------
13	Cathedral School for the Deaf	1	1	0	5	6	------	------	0	0	4	------	95	------	------	------	------
14	Springer Institute*	1	0	0	10	10	------	------	0	0	------	------	------	------	------	------	------
15	St. John's Catholic Deaf-Mute Institute	2	1	3	16	10	21	24	15	4	0	110	------	------	------	------	------

* Statistics of 1888-89.

a "For beneficiaries."

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TABLE 8.—*Summary of statistics of public institutions for the blind, for 1889–90.*

Division and State.	Number of institutions.	Instructors.				Pupils.							Volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Receipts.	Expenditures.
		Male.	Female.	Total.	Music.	Male.	Female.	Total.	In vocal culture.	In instrumental music.	In tuning.	Graduates in 1889–90.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
United States	33	127	191	318	120	499 (469)	1,247	3,215	1,224	980	183	150	35,450	$12,849	$5,121,987	$819,050	$718,753
North Atlantic Division	4	26	56	82	37	208 (469)	171	848	289	802	90	75	9,100	7,751	1,351,541	301,104	220,552
Massachusetts	1	14	18	32	14	a226		226	.....	.....	.....	6	.....	.....	426,198	48,000	52,785
New York	2	10	29	39	14	243)		374	147	190	71	.....	4,500	5,751	760,537	141,234	117,389
Pennsylvania	1	2	9	11	9	72	59										
						136	112	248	142	112	19	69	4,600	2,000	164,806	111,870	50,378
South Atlantic Division	8	26	24	50	20	242	187	429	157	164	8	28	4,023	900	759,000	56,796	58,507
Maryland	2	8	7	15	4	73	56	129	66	53	7	18	1,823	.....	378,000	40,796	40,678
Virginia	1	4	3	7	3	22	24	46	0	.....	0	.....	c250	300	200,000	(b)	(b)
West Virginia	1	2	2	4	2	19	17	36	6	26	1	4	c400	.....	70,000	(b)	(b)
North Carolina	1	4	6	10	5	51	40	91	0	.....	0	3	.....	100	.....	.....	3,750
South Carolina	1	1	1	2	1	20	11	31	0	.....	0	.....	.....	.....	.....	.....	.....
Georgia	1	6	4	10	5	53	35	88	85	85	0	2	1,500	500	96,000	16,000	14,077
Florida	1	1	1	2	0	4	4	8	0	0	0	0	a50	.....	16,000	.....	.....
South Central Division	8	32	41	73	25	360	305	665	291	247	48	17	7,839	3,000	553,500	197,378	170,102
Kentucky	1	4	5	9	2	60	45	105	98	50	5	6	2,500	1,500	100,000	36,095	30,040
Tennessee	1	2	8	10	10	48	46	94	0	0	7	4	500	200	100,000	17,000	.....
Alabama	1	4	2	6	2	44	20	64	40	35	5	1	575	100	50,000	14,720	25,220
Mississippi	1	2	1	3	1	21	14	35	13	21	0	0	820	.....	55,000	15,500	820
Louisiana	1	2	3	5	1	14	16	30	8	13	0	0	575	.....	40,000	37,500	37,600
Texas	2	10	15	25	5	97	75	172	35	75	8	6	d1,691	1,000	133,500	d40,610	a40,610
Arkansas	1	8	7	15	4	76	80	165	97	53	23	0	1,178	200	75,000	35,953	34,912

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North Central Division	10	37	64	101	35	641	556	1,197	452	241	37	30	14,358	4,073	1,848,946	259,772	265,592
Ohio	1	8	11	19	7	131	99	230	139	25	12	12	2,050	----	500,000	60,194	48,329
Indiana	1	3	8	11	3	67	63	130	72	10	0	----	1,250	1,000	350,000	30,000	40,711
Illinois	1	5	9	14	5	106	81	187	50	100	15	5	2,111	----	189,025	41,899	65,124
Michigan	1	3	6	9	3	56	39	95	42	11	3	3	1,540	873	169,921	24,662	22,361
Wisconsin	1	3	4	7	3	51	39	90	64	58	1	0	2,500	1,600	165,000	26,000	20,475
Minnesota	1	1	2	3	3	33	31	64	0	0	0	5	----	----	----	15,427	15,417
Iowa	1	3	8	11	3	85	86	171	0	0	0	----	----	----	----	----	----
Missouri	1	4	6	10	4	47	52	99	0	0	0	0	3,580	350	250,000	25,780	35,200
Nebraska	1	2	5	7	3	24	33	57	45	37	4	3	777	250	75,000	14,600	13,200
Kansas	1	5	5	10	1	41	33	74	40	0	2	2	550	----	150,000	21,210	4,775
Western Division	3	6	6	12	3	48	28	76	35	26	0	0	130	125	609,000	4,000	4,000
Colorado	1	1	3	4	1	19	14	33	33	20	0	0	(b)	----	155,000	(b)	(b)
Oregon	1	3	2	5	1	4	3	7	2	6	0	----	130	125	6,000	4,000	4,000
California	1	2	1	3	1	25	11	36	0	0	0	2	(b)	----	448,000	(b)	(b)

a From catalogue of institution.
b See Table No. 4, Part IV.
c Raised letters.
d For Texas Institution for the Blind.

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TABLE 9.—*Statistics of public institutions for the blind, for 1889-90.*—PART I.

	Post-office.	Name.	Year of first opening.	Controlling body.				Executive.		
				Name.	No.	Term.	By whom appointed.	Name.	Title.	By whom appointed.
	1	2	3	4	5	6	7	8	9	10
1	Talladega, Ala...	The Alabama Academy for the Blind.	1867	Board of commissioners.	8	6 years.	Governor	J. H. Johnson, jr.	Superintendent.	Board of commissioners.
2	Little Rock, Ark.	Arkansas School for the Blind.	1859	Board of trustees .	5	2 years.	Governor, confirmed by the senate.	Rev. John H. Dye, D. D.	....do	Board of trustees.
3	Berkeley, Cal....	California Institution for the Education of the Deaf and Dumb and the Blind.	1860	Board of directors.	5	4 years.	Governor	Warring Wilkinson.	Principal.	Board of directors.
4	Colorado Springs, Colo.	Colorado Institution for the Education of the Mute and the Blind.	1883	Board of trustees .	5	6 years.	Governor, confirmed by the senate.	John E. Ray, A. M.	Superintendent.	Board of trustees.
5	St. Augustine, Fla.	Florida Blind and Deaf-Mute Institute.	1885	Board of managers	4	4 years.	Elected by the people.	William A. Caldwell.	Principal.	Board of managers.
6	Macon, Ga.....	Georgia Academy for the Blind....	1852	.....	....	.....	.....	W. D. Williams .	....do	
7	Jacksonville, Ill .	Illinois Institution for the Education of the Blind.	1849	Board of trustees .	3	6 years.	Governor, approved by the senate.	William S. Phillips.	Superintendent.	Board of trustees.
8	Indianapolis, Ind.	Indiana Institution for the Education of the Blind.	1846	.....	....	.....	.....	Elmer E. Griffith.	....do	
9	Vinton, Iowa	Iowa College for the Blind	1852	Trustees	6	2 years.	Legislature..	J. F. McCune	Principal.	Trustees.
10	Wyandotte, Kans	Kansas Institution for the Education of the Blind.	1867	Board of trustees .	5	3 years.	Governor	Allen Buckner...	Superintendent.	Board of trustees.
11	Louisville, Ky...	Kentucky Institution for the Education of the Blind.	1842	Board of visitors..	9	4 years.	....do	B. B. Huntoon...	....do	Board of visitors.
12	Baton Rouge, La.	Louisiana Institution for the Blind and Industrial Home.	1871	.....	....	.....	.....	Mary Stratton Lane.	Principal.	
13	Baltimore, Md...	Maryland School for the Blind	1853	Board of directors.	18	1 year..	Elected by corporation.	Frederick D. Morrison.	Superintendent.	Board of directors.
14	....do	Maryland School for Colored Blind and Deaf.	1872	Board of trustees .	6	1 year..	(a)	....do	....do	Board of trustees.
15	Boston, Mass....	Perkins Institution and Massachusetts School for the Blind.	1829	....do	12	1 year..	Governor and corporation.	John A. Bennett.	Director ..	Do.

16	Lansing, Mich	Michigan School for the Blind	1880	Board of control	3	6 years.	Governor, confirmed by the senate.	Robt. Barker	Superintendent.	Board of control.
17	Faribault, Minn.	Minnesota School for the Blind	1866	Board of directors.	7	5 years.	Governor	James J. Dow	....do	Board of trustees.
18	Jackson, Miss	Mississippi Institution for the Instruction of the Blind.	1848	Board of trustees	5	4 years.	....do	Peter Fairly	....do	Do.
19	St. Louis, Mo. (1827 Morgan street).	Missouri School for the Blind	1851	....do	9	4 years.	....do	Jno. T. Sibley	....do	Do.
20	Nebraska City, Nebr.	Nebraska Institute for the Blind	1875	Board of public lands and buildings.	4	2 years.	State electors	J. B. Parmelee	Principal	Governor.
21	Batavia, N. Y.	New York State Institution for the Blind.	1868	Board of trustees	9	6 years.	Governor	Arthur G. Clement.	Superintendent.	Board of trustees.
22	New York, N. Y.	New York Institution for the Blind	1831	Board of managers	20	1 year	Self-perpetuating.	W. B. Wait	....do	Board of managers.
23	Raleigh, N. C	North Carolina Institution for the Deaf and Dumb and the Blind.	1845	Board of trustees	7	6 years.	Governor	W. J. Young	Principal	Board of trustees.
24	Columbus, Ohio.	Ohio Institution for the Education of the Blind.	1837	....do	5	5 years.	Governor, confirmed by the senate.	Dr. H. P. Fricker	Superintendent.	Do.
25	Salem, Oregon	Oregon Institute for the Blind	1873	Board of education	3	4 years.	Elected	David B. Gray	....do	Board of education.
26	Philadelphia, Pa.	Pennsylvania Institution for the Instruction of the Blind.	1833	Board of managers	24	Life	Self-perpetuating.	Edward E. Allen	Principal	Board of managers.
27	Cedar Springs, S. C.	South Carolina Institution for the Education of the Deaf and Dumb and the Blind.	1849	Board of commissioners.	5	Indefinite.	Governor	N. F. Walker	Superintendent.	Board of commissioners.
28	Nashville, Tenn.	Tennessee School for the Blind	1844	Board of trustees	7	Life	Legislature	S. A. Link	....do	Board of trustees.
29	Austin, Tex.	Deaf, Dumb, and Blind Institute for Colored Youth.	1887					W. H. Holland	....do	
30	....do	Texas Institution for the Blind	1857	Board of trustees	5	2 years.	Governor	Frank Rainey	....do	Board of trustees.
31	Staunton, Va.	Virginia Institution for the Education of the Deaf and Dumb and of the Blind.	1839	Board of directors.	9	3 years.	....do	Thomas S. Doyle	Principal	Do.
32	Romney, W. Va.	West Virginia Schools for the Deaf and the Blind.	1870	Board of regents	7	4 years.	....do	C. H. Hill	....do	Board of regents.
33	Janesville, Wis.	Wisconsin School for the Blind	1850	Board of supervision.	5	5 years.	Governor, confirmed by the senate.	Mrs. Sarah F. C. Little, M. A.	Superintendent.	Board of supervision.

a Presidents of Maryland School for Blind and Maryland School for Deaf.

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TABLE 9.—*Statistics of public institutions for the blind, for 1889-90.*—PART II.

	Name.	Instructors.			Pupils.							Number of graduates in 1889-90.	Total number of graduates since organization.	Percentage of those leaving institution that are self-supporting.
		Male.	Female.	Music.	Male.	Female.	Present Dec. 1, 1889.	Present June 1, 1890.	In vocal culture.	In instrumental music.	In tuning.			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Alabama Academy for the Blind	4	2	2	44	20	50	50	40	35	5	1	....	.....
2	Arkansas School for the Blind	8	7	4	76	89	150	150	97	53	23	0	75	75
3	California Institution for the Education of the Deaf and Dumb and Blind.	2	1	1	25	11	35	....	....	....	....	2	....	.....
4	Colorado Institution for the Education of the Mute and Blind.	1	3	1	19	14	30	31	33	20	0	0	0	.....
5	Florida Blind and Deaf-Mute Institute.	1	1	0	4	4	....	8	0	0	0	0	0	.....
6	Georgia Academy for the Blind	6	4	5	53	35	83	82	88	88	0	3	350	95
7	Illinois Institution for the Education of the Blind.	5	9	5	106	81	175	157	50	100	15	5	64	.....
8	Indiana Institution for the Education of the Blind.	3	3	3	67	63	116	111	130	72	10	....	250	.....
9	Iowa College for the Blind	3	3	3	85	86	148	96	....	....	....	....	....	.....
10	Kansas Institution for the Education of the Blind.	5	5	1	41	33	74	....	76	40	....	2	....	50
11	Kentucky Institution for the Education of the Blind.	4	5	2	60	45	105	103	98	50	5	6	450	.....
12	Louisiana Institution for the Blind and Industrial Home.	2	3	1	14	6	20	20	8	13	0	0	3	.....
13	The Maryland School for the Blind.	5	6	3	57	46	91	97	42	40	7	15	227	.....
14	Maryland School for Colored Blind and Deaf.	3	1	1	16	10	22	23	24	13	0	3	32	.....
15	Perkins Institution and Massachusetts School for the Blind.	14	18	14	....	....	....	....	....	....	....	6	....	95
16	Michigan School for the Blind	3	6	3	56	39	88	71	93	42	11	3	3	50
17	Minnesota School for the Blind	1	2	3	33	31	59	61	64	55	4	5	....	.....
18	Mississippi Institution for the Instruction of the Blind.	1	2	1	21	14	29	24	13	21	....	0	....	.....
19	Missouri School for the Blind	4	6	4	47	52	91	87	....	....	....	0	607	60
20	Nebraska Institute for the Blind	2	5	3	24	33	50	52	45	37	4	3	14	75
21	New York State Institution for the Blind.	5	11	6	72	59	120	115	....	92	23	1	74	.....
22	New York Institution for the Blind.	5	18	8	(243)		....	....	147	98	48	....	....	.....
23	The North Carolina Institution for the Deaf and Dumb and the Blind.	4	6	5	51	40	....	51	....	....	....	3	....	90
24	Ohio Institution for the Education of the Blind.	8	11	7	131	99	215	213	13	139	25	12	....	.....
25	Oregon Institute for the Blind	3	2	1	4	3	7	....	2	6	....	....	....	30
26	Pennsylvania Institute for the Instruction of the Blind.	2	9	9	136	112	192	192	142	112	19	69	1310	.....
27	South Carolina Institution for the Education of the Deaf and Dumb and the Blind.	1	1	1	20	11	....	29	....	....	....	....	....	.....
28	Tennessee School for the Blind	2	3	2	48	46	86	88	(a)	(a)	7	4	....	75
29	Deaf, Dumb, and Blind Institute for Colored Youth.	....	1	1	15	13	25	28	28	11	....	0	0	.....
30	Texas Institution for the Blind	5	9	4	82	62	135	132	7	64	8	6	36	60
31	The Virginia Institution for the Education of the Deaf and Dumb and the Blind.	4	3	3	22	24	47	45	....	....	....	....	....	.....
32	West Virginia Schools for the Deaf and the Blind.	2	2	2	19	17	36	35	6	26	1	4	32	.....
33	Wisconsin School for the Blind	1	3	3	51	36	81	78	64	58	1	0	14	75

a Nearly all the school are instructed.

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TABLE 9.—*Statistics of public institutions for the blind, for 1889–90.*—PART III.

	Name.	Primary department.				Academic department.								Industrial department.									Method of instruction.
		Spelling.	Reading.	Writing.	Arithmetic.	English language and literature.	Latin.	Arithmetic, higher.	Algebra.	Geometry.	Physics.	Chemistry.	History, general.	Broom-making.	Mattress-making.	Shoemaking.	Brush-making.	Chair-caning.	Sewing.	Knitting.	Cooking.	Crocheting.	Other trades.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Alabama Academy for the Blind	50	50	50	50	15	...	30	12	8	20	....	30	....	35	....	....	35	....	....	....	....	....	Line letter, Braille, New York point.
2	Arkansas School for the Blind	113	97	54	128	55	...	41	11	7	13	7	10	45	40	32	25	15	60	20	....	20	60	Raised letters, New York point.
3	California Institution for the Education of the Deaf and Dumb and the Blind.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Boston square, New York point.
4	Colorado Institution for the Education of the Mute and Blind.	14	14	14	14	16	0	16	0	0	0	0	16	0	0	0	0	5	0	0	0	0	0	Line print, New York point.
5	Florida Blind and Deaf-Mute Institute	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Raised letters.
6	Georgia Academy for the Blind	....	....	....	....	....	....	....	....	....	....	....	....	....	10	0	10	10	....	....	....	....	....	Line, New York point.
7	Illinois Institute for the Education of the Blind	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Roman raised print, New York point.
8	Indiana Institution for the Education of the Blind.	130	130	68	119	25	0	15	11	11	11	11	11	0	0	0	0	44	36	0	0	0	74	New York point, embossed line type.
9	Iowa College for the Blind	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
10	Kansas Institution for the Education of the Blind.	77	35	77	....	....	....	7	12	....	....	....	....	15	....	....	....	....	....	....	....	....	....	New York point.
11	Kentucky Institution for the Education of the Blind.	36	83	83	104	18	....	18	....	....	18	....	18	10	8	....	....	36	....	....	....	....	....	New York point, roman.
12	Louisiana Institution for Blind and Industrial Home.	13	13	13	13	7	....	6	....	....	4	2	....	....	4	0	0	6	4	0	....	....	2	Braille, New York point, line letter.
13	The Maryland School for the Blind	64	64	32	64	19	19	19	19	19	19	19	19	8	5	0	0	17	31	19	0	0	0	New York point, line letter.
14	Maryland School for Colored Blind and Deaf	22	22	20	26	....	....	....	....	....	....	....	....	0	6	0	....	18	13	0	0	0	0	New York point, Boston type.
15	Perkins Institution and Massachusetts School for the Blind.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Line type, improved Braille.
16	Michigan School for the Blind	55	41	8	23	23	...	11	10	....	13	....	(a)	40	....	....	....	....	39	....	....	....	....	Embossed point, New York point.
17	Minnesota School for the Blind	37	34	35	50	19	....	....	4	....	....	6	12	21	6	....	....	....	43	....	....	....	....	Line, New York point.

a Twenty-two are studying United States history.

TABLE 9.—*Statistics of public institutions for the blind, for 1889-90.*—PART III—Continued.

	Name.	Primary department.				Academic department.								Industrial department.									Method of instruction.
		Spelling.	Reading.	Writing.	Arithmetic.	English language and literature.	Latin.	Arithmetic, higher.	Algebra.	Geometry.	Physics.	Chemistry.	History, general.	Broom-making.	Mattress-making.	Shoemaking.	Brush-making.	Chair-caning.	Sewing.	Knitting.	Cooking.	Crocheting.	Other trades.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
18	Mississippi Institution for the Instruction of the Blind.	33	33	11	29	....	....	4	1	....	....	....	9	....	12	....	....	14	....	....	....	....	....	Raised type, line, New York point.
19	Missouri School for the Blind	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Braille point, line letter.
20	Nebraska Institute for the Blind	41	36	34	34	17	....	....	14	5	....	....	....	8	....	....	6	....	....	....	....	....	....	New York point, raised letter.
21	New York State Institution for the Blind	90	90	90	89	....	8	....	12	6	....	12	8	....	10	....	....	23	....	....	....	....	....	Point print, New York system.
22	New York Institution for the Blind	62	62	50	128	45	1	33	18	1	21	....	50	....	8	....	....	56	24	69	7	....	....	New York or Wait system.
23	The North Carolina Institution for the Deaf and Dumb and the Blind.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Line, New York point.
24	Ohio Institution for the Education of the Blind.	105	109	23	172	27	....	....	27	12	11	....	31	....	....	....	....	16	....	....	....	....	....	Line letters, New York point.
25	Oregon Institute for the Blind	7	7	7	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	New York point.
26	Pennsylvania Institution for the Instruction of the Blind.	28	147	....	128	27	13	....	19	....	36	....	73	33	13	....	....	54	....	....	....	....	21	New York point, Braille points and line.
27	South Carolina Institution for the Education of the Deaf and Dumb and the Blind.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Point and line.
28	Tennessee School for the Blind	23	22	30	65	75	15	....	16	9	....	....	39	15	10	....	....	10	....	....	....	....	....	Line, Braille, New York point.
29	Deaf, Dumb and Blind Institute for Colored Youth.	28	20	....	12	....	....	....	....	....	....	....	....	....	....	....	....	....	7	....	....	....	7	Butler's raised letters, New York point.
30	Texas Institution for the Blind	71	75	16	92	63	....	....	9	4	....	....	41	23	11	....	....	37	....	....	....	....	37	Embossed print, New York point.
31	The Virginia Institution for the Education of the Deaf and Dumb and of the Blind.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Line letter, New York point.
32	West Virginia Schools for the Deaf and the Blind.	35	23	14	27	21	0	8	0	0	0	0	12	9	10	0	....	4	....	17	....	....	....	Line, Wait point.
33	Wisconsin School for the Blind	65	67	26	70	11	....	9	2	10	11	....	....	8	....	....	....	6	....	33	....	....	63	Line, New York point.

TABLE 9.—*Statistics of public institutions for the blind, for 1889–90.*—PART IV.

	Name.	Volumes in library.	Annual cost per capita.	Value of scientific apparatus.	Value of grounds and buildings.	Receipts.		Expenditures.	
						State, county, or municipal appropriation.	Other sources.	Buildings and improvements.	For support.
	1	2	3	4	5	6	7	8	9
1	Alabama Academy for the Blind	575	$230	$100	$50,000	$14,720	.....	$11,500	$14,720
2	Arkansas School for the Blind	1,178	.....	200	175,000	35,071	$882	5,149	29,763
3	California Institution for the Education of the Deaf and Dumb, and the Blind.	a250	.....	.....	(a)	(a)	.....	(a)	(a)
4	Colorado Institution for the Education of the Mute and the Blind.	200	275	0	(a)	(a)	.....	(a)	(a)
5	Florida Blind and Deaf-Mute Institute.	a50	.....	.....	16,000	.....	.....	.....	.....
6	Georgia Academy for the Blind	1,500	168	500	95,000	16,000	.....	.....	14,079
7	Illinois Institution for the Education of the Blind.	2,111	251	.....	189,025	38,000	$3,899	20,860	44,264
8	Indiana Institution for the Education of the Blind.	1,250	238	1,000	350,000	30,000	.....	11,486	29,225
9	Iowa College for the Blind	.....	.....	.....	.....	.....	.....	.....	.....
10	Kansas Institution for the Education of the Blind.	550	222	.....	150,000	20,000	b1,210	800	3,975
11	Kentucky Institution for the Education of the Blind	2,500	217	1,500	100,000	36,095	.....	5,986	24,054
12	Louisiana Institution for the Blind and Industrial Home.	575	.....	.....	40,000	7,500	c30,000	30,000	7,500
13	The Maryland School for the Blind.	1,439	293	.....	343,000	.....	31,479	9,386	23,395
14	Maryland School for Colored Blind and Deaf.	384	232	.....	35,000	.....	9,317	703	7,194
15	Perkins Institution and Massachusetts School for the Blind.	.....	.....	.....	426,198	30,000	d18,000	7,180	45,605
16	Michigan School for the Blind	1,540	235	873	169,921	24,662	0	.....	21,361
17	Minnesota School for the Blind	.....	246	.....	.....	15,427	.....	1,495	13,922
18	Mississippi Institution for the Instruction of the Blind.	820	.....	.....	55,000	.....	.....	900	6,500
19	Missouri School for the Blind	3,580	215	250	250,000	e25,500	d280	10,000	25,200
20	Nebraska Institute for the Blind	777	250	250	75,000	14,600	.....	.....	13,200
21	New York State Institution for the Blind.	1,150	163	191	375,582	47,640	946	3,566	39,044
22	New York Institution for the Blind.	3,350	283	5,560	384,957	51,376	41,272	5,969	68,810
23	The North Carolina Institution for the Deaf and Dumb and the Blind.	.....	200	100	.....	.....	.....	.....	3,750
24	Ohio Institution for the Education of the Blind.	2,050	201	.....	500,000	60,194	.....	.....	48,339
25	Oregon Institute for the Blind	130	.....	125	6,000	4,000	.....	.....	4,000
26	Pennsylvania Institution for the Instruction of the Blind.	4,600	285	2,000	164,896	46,750	65,120	.....	c50,378
27	South Carolina Institution of the Deaf and Dumb and the Blind.	.....	.....	.....	.....	.....	.....	.....	.....
28	Tennessee School for the Blind	500	200	200	100,000	17,000	.....	.....	.....
29	Deaf, Dumb, and Blind Institute for Colored Youth.	9	144	0	32,000	(a)	.....	(a)	(a)
30	Texas Institution for the Blind	1,691	254	1,000	133,500	40,610	.....	4,000	36,610
31	The Virginia Institution for the Education of the Deaf and Dumb and of the Blind.	g250	.....	a300	(a)	(a)	(a)	.....	.....
32	West Virginia Schools for the Deaf and the Blind.	g400	260	0	(a)	(a)	(a)	.....	(a)
33	Wisconsin School for the Blind	2,500	300	2,400	165,000	26,000	.....	3,975	20,500

a See table No. 4, Part IV.
b Received from Industrial Department.
c Donation from Louisiana Board for Assistance of Blind.
d This is from other States for support of their "beneficiaries."
e One-half of the biennial appropriation.
f Total expenditures for the year are reported as $104,777.
g Raised type.

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TABLE 10.—*Number of pupils congenitally blind in public institutions—Number not wholly blind—Statistics of public institutions for the blind for 1889–90.*

	Post-office.	Name.	Age of admission of pupils.	Number of pupils congenitally blind.	Not congenitally blind.	Date of blindness unknown.	Not wholly blind.
	1	2	3	4	5	6	7
1	Talladega, Ala	Alabama Academy for the Blind	*8	12	----	----	12
2	Little Rock, Ark	Arkansas School for the Blind	6-26	50	115	----	49
3	Berkeley, Cal	California Institution for the Education of the Deaf and Dumb and the Blind.	8-18	0	----	----	----
4	Colorado Springs, Colo.	Colorado Institution for the Education of the Mute and the Blind.	4-22	5	27	1	13
5	St. Augustine, Fla	Florida Blind and Deaf-Mute Institute	6-21	----	----	----	2
6	Macon, Ga	Georgia Academy for the Blind	8-20	----	----	----	----
7	Jacksonville, Ill	Illinois Institution for the Education of the Blind.	6	----	----	----	----
8	Indianapolis, Ind	Indiana Institution for the Education of the Blind.	8	41	69	0	78
9	Vinton, Iowa	Iowa College for the Blind	----	16	55	----	100
10	Wyandotte, Kans	Kansas Institution for the Education of the Blind.	9	----	----	----	----
11	Louisville, Ky	Kentucky Institution for the Education of the Blind.	6-18	25	80	10	93
12	Baton Rouge, La	Louisiana Institution for Blind and Industrial Home.	8	6	14	----	2
13	Baltimore, Md	The Maryland School for the Blind	7-20	41	62	----	52
14	....do	Maryland School for Colored Blind and Deaf.	7	3	20	3	13
15	Boston, Mass	Perkins Institution and Massachusetts School for the Blind.	5	----	----	----	----
16	Lansing, Mich	Michigan School for the Blind	10-21	22	73	7	32
17	Faribault, Minn	Minnesota School for the Blind	8-25	----	----	----	----
18	Jackson, Miss	Mississippi Institution for the Instruction of the Blind.	8	----	----	----	----
19	St. Louis, Mo	Missouri School for the Blind	9-25	15	84	----	32
20	Nebraska City, Nebr.	Nebraska Institute for the Blind	9-21	13	44	----	25
21	Batavia, N. Y	New York State Institution for the Blind	8-21	----	----	----	----
22	New York, N. Y	New York Institution for the Blind	*8	----	----	----	----
23	Raleigh, N. C	The North Carolina Institution for the Deaf and Dumb and the Blind.	8	40	----	58	----
24	Columbus, Ohio	Ohio Institution for the Education of the Blind.	8	93	126	11	109
25	Salem, Oregon	Oregon Institute for the Blind	7-21	3	4	1	1
26	Philadelphia, Pa	Pennsylvania Institution for the Instruction of the Blind.	6-21	30	218	----	83
27	Cedar Spring, S. C	South Carolina Institution for the Education of the Deaf and Dumb and the Blind.	10	----	----	----	11
28	Nashville, Tenn	Tennessee School for the Blind	7-17	----	----	----	24
29	Austin, Tex	Deaf, Dumb, and Blind Institute for Colored Youth.	7-21	14	11	----	3
30	....do	Texas Institution for the Blind	8-20	8	105	----	136
31	Staunton, Va	The Virginia Institution for the Education of the Deaf and Dumb and of the Blind.	7-21	23	27	----	22
32	Romney, W. Va	West Virginia Schools for the Deaf and the Blind.	8	17	19	0	16
33	Janesville, Wis	Wisconsin School for the Blind	8-21	43	44	3	49

*And over.

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TABLE 11.—*Summary of statistics of public institutions for the feeble-minded, for 1889–90.*

States.	Number of institutions.	Instructors.					Pupils.				Volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Receipts.	Expenditures.
		Male.	Female.	Total.	In industrial department.	Assistants in caring for inmates.	Male.	Female.	Total.	In kindergarten.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
United States	17	14	102	176	91	316	2,255 (974)	1,921	5,150	1,389	2,050	$660	$2,789,147	$1,156,014	$1,100,518
North Atlantic Division	8	3	82	85	46	93	635 (654)	818	2,107	208	1,435	300	1,102,429	487,930	491,677
Massachusetts	1	3	9	12	5	52	162	131	293	38	0	0	137,000	139,410	133,370
Connecticut	1	0	3	3	0	12	79	54	133	27	0	.....	.....	27,430	27,430
New York	3	0	51	51	16	103	336	580	916	58	335	200	465,429	175,485	182,604
New Jersey	2	0	7	7	6	16	58	53	111	35	100	100	50,000	29,638	29,136
Pennsylvania	1	0	12	12	19	.....	654		654	50	1,000	.....	450,000	115,967	119,137
South Central Division	1	0	6	6	4	6	78	71	149	18	300	.....	60,000	81,600	92,000
Kentucky	1	0	6	6	4	6	78	71	149	18	300	.....	60,000	81,600	92,000
North Central Division	7	10	72	82	32	212	1,473 (320)	985	2,778	1,047	315	360	1,581,718	541,465	481,948
Ohio	1	0	23	23	16	38	583	342	925	925	0	.....	660,853	163,515	130,626
Indiana	1	3	17	20	8	50	194	142	336	24	0	.....	280,000	76,233	74,923
Illinois	1	2	9	11	.....	34	243	197	440	58	180	.....	198,865	66,000	72,810
Minnesota	1	1	5	6	2	57	320		320	20	135	150	167,000	57,990	71,819
Iowa	1	3	11	14	3	18	308	209	517	0	0	.....	275,000	112,914	83,529
Nebraska	1	1	4	5	2	9	82	47	129	.....	0	200	86,000	36,038	21,802
Kansas	1	0	3	3	1	6	63	48	111	20	0	10	30,000	28,775	26,439
Western Division	1	1	2	3	9	5	69	47	116	116	0	.....	45,000	45,019	34,893
California	1	1	2	3	9	5	69	47	116	116	0	.....	45,000	45,019	34,893

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TABLE 12.—*Summary of statistics of private institutions for the feeble-minded.*

States.	Number of institutions.	Instructions.					Pupils.				Volumes in library.	Receipts.	Expenditures.
		Male.	Female.	Total.	In industrial department.	Assistants in caring for inmates.	Male.	Female.	Total.	In kindergarten.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
United States	10	5	33	38	26	35	141	69	210	23	1,300	$4,000	$3,500
North Atlantic Division	8	2	25	27	14	34	102	52	154	7	1,000	4,000	3,500
Massachusetts	3	1	10	11	14	29	62	24	86	0	0	.....	.....
Connecticut	1	.....	.....	.....	.....	.....	6	.....	6	0	500	4,000	.....
New York	2	.....	9	9	.....	.....	26	18	44	0	0	.....	.....
New Jersey	2	1	6	7	3	5	8	10	18	7	500	.....	5,500
South Atlantic Division	1	3	3	5	3	1	12	5	17	7	300	.....	.....
Maryland	1	2	3	5	3	1	12	5	17	7	300	.....	.....
North Atlantic Division	1	1	5	6	6	0	27	12	39	9	.....	.....	.....
Michigan	1	1	5	6	6	0	27	12	39	9	.....	.....	.....

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TABLE 13.—*Statistics of public institutions for the feeble-minded, for 1889-90.*—PART I.

	Post-office.	Name.	Year of first opening.	Controlling body.				Executive.		
				Name.	No.	Term.	By whom appointed.	Name.	Title.	By whom appointed.
	1	2	3	4	5	6	7	8	9	10
1	Santa Clara, Cal.	California Home for the Care and Training of Feeble-Minded Children.	1885	Board of trustees.	5	4 years.	Governor	A. Edgar Osborne, M. D., PH. D.	Superintendent.	Board of trustees.
2	Lakeville, Conn.	Connecticut School for Imbeciles.	1858	Board of directors.	14	1 year.		Geo. H. Knight.	do	Do.
3	Lincoln, Ill	Illinois Asylum for Feeble-Minded Children.	1865	Trustees	3	6 years.	Governor	Dr. Wm. B. Fish.	do	Trustees.
4	Fort Wayne, Ind.	Indiana School for Feeble-Minded Youth.	1879	Board of trustees.	3	2-4 years	do	John G. Blake	do	Board of trustees.
5	Glenwood, Iowa.	Iowa Institution for Feeble-Minded Children.	1876	do	3	6 years.	Legislature	Dr. F. M. Powell.	do	Do.
6	Winfield, Kans.	State School for Idiotic and Imbecile Youth.	1881	do	5	3 years.	Governor, confirmed by the senate.	C. K. Wiles	do	Do.
7	Frankfort, Ky	The Kentucky Institution for the Education and Training of Feeble-Minded Children.	1860	Board of commissioners.	9	6 years.	Governor	John Quincy Adams Stewart, M.D.	do	Governor.
8	South Boston, Mass.	Massachusetts School for the Feeble-Minded.	1848	Board of trustees.	12	3 years.	Governor and corporation.	Walter E. Fernald, M.D.	do	Board of trustees.
9	Faribault, Minn.	Minnesota School for Feeble-Minded.	1879	Board of directors.	7	5 years.	Governor	A. C. Rogers, M.D.	do	Board of directors.
10	Beatrice, Nebr.	Nebraska Institution for Feeble-Minded Youth.	1887	Board of public lands and buildings.				J. T. Armstrong, M.D.	do	Board of public lands and buildings.
11	Vineland, N. J.	The New Jersey Home for the Education and Care of Feeble-Minded Children.	1888	Board of directors.	13	1-4 years	The Association.	S. O. Garrison	do	Board of directors.
12	Vineland, N. J.	New Jersey State Institution for Feeble-Minded Women.	1888					Mary J. Dunlap, M.D.	do	
13	Newark, N. Y.	New York State Custodial Asylum for Feeble-Minded Women.	1878	Board of trustees.	9	6 years.	Governor, with consent of senate.	W. L. Willett	do	Board of trustees.
14	Randalls Island, New York City, N. Y.	School for Feeble-Minded	1867					M. C. Dunphy		

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TABLE 13.—*Statistics of public institutions for the feeble-minded, for 1889-90.*—PART I—Continued.

	Post-office.	Name.	Year of first opening.	Controlling body.				Executive.		
				Name.	No.	Term.	By whom appointed.	Name.	Title.	By whom appointed.
	1	2	3	4	5	6	7	8	9	10
15	Syracuse, N. Y.	New York State Asylum for Idiots.	1851	Board of trustees.	8	8 years.	Governor and senate.	James C. Carson.	Superintendent.	Board of trustees.
16	Columbus, Ohio.	The Ohio Institution for Feeble-Minded Youth.	1857	....do.....	5	5 years.	Governor and senate.	Gustavus A. Doren, M.D.	....do.....	Do.
17	Elwyn, Pa.....	Pennsylvania Training School for Feeble-Minded Children.	1853	Board of directors.	21	.....	Members of corporation.	.....	Medical superintendent.	Board of directors.

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TABLE 13.—*Statistics of public institutions for the feeble-minded, for 1889–90.*—PART II.

	Name	Instructors.				Pupils.					Age of admission of pupils.	Years inmates receive instruction.	Number dismissed in 1889–90.	Number dismissed since organization of institution.	Percentage of those leaving institution that are self-supporting.
		Male.	Female.	In industrial department.	Assistants in caring for inmates.	Male.	Female.	Present Dec. 1, 1889.	Present June 1, 1890.	In kindergarten.					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	California Home for the Care and Training of Feeble-Minded Children.	1	2	9	5	69	47	106	114	116	5–21	Indefinite	2	.....	.....
2	Connecticut School for Imbeciles	0	3	0	12	79	54	130	132	27	.....	.....	6	.....	.....
3	Illinois Asylum for Feeble-Minded Children	2	9	.....	34	243	197	390	398	58	*a*6	6–21	58	.....	.....
4	Indiana School for Feeble-Minded Youth	3	17	8	50	194	142	.....	239	24	Up to 18	Permanently.	22	.....	(*b*)
5	Iowa Institution for Feeble-Minded Children	3	11	3	18	308	209	397	426	0	5–18	5–10	85	477	10
6	State School for Idiotic and Imbecile Youth	0	3	1	6	63	48	102	103	20	5–15	Not limited	9	.....	.....
7	The Kentucky Institution for the Education and Training of Feeble-Minded Children.	.....	6	4	6	78	71	143	143	18	6–18	....do	17	.....	50
8	Massachusetts School for the Feeble-Minded	3	9	5	52	162	131	292	216	38	4–25	Unlimited	24	909	0
9	Minnesota School for Feeble-Minded	1	5	2	57	(320)		183	300	20	No limit	....do	5	76	.....
10	Nebraska Institution for Feeble-Minded Youth	1	4	2	9	82	47	68	91	.....	5–18	....do	0	0	.....
11	The New Jersey Home for the Education and Care of Feeble-Minded Children.	0	4	4	14	58	22	.....	74	35	5 and over	8	5	.....	0
12	New Jersey State Institution for Feeble-Minded Women	0	3	2	2	0	31	11	20	0	15 and over	Unlimited	7	.....	.....
13	New York State Custodial Asylum for Feeble-Minded Women	0	37	.....	6	0	267	200	233	0	13 and over	....do	17	.....	.....
14	School for Feeble-Minded	0	3	5	5	67	53	110	120	28	6 and over	.....	10	175	20
15	New York State Asylum for Idiots	0	11	11	92	269	260	487	490	30	7–14	Unlimited	46	.....	.....
16	The Ohio Institution for Feeble-Minded Youth	0	23	16	38	583	342	765	817	925	6–15	....do	27	.....	.....
17	Pennsylvania Training School for Feeble-Minded Children*	1	0	12	12	19	....	(654)		654	.....	.....	.....	.....	.....

*Statistics of 1888–89.

a Girls from 6 to any age.

b Few if any.

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TABLE 13.—*Statistics of public institutions for the feeble-minded, for 1889-90.*—PART III.

	Name.	Kindergarten.			School studies.								Industrial training.							Physical training.
		The cultivation of the perceptive faculties and improvement of speech.	Simple manual exercises to overcome imperfections on use of fingers, etc.	Occupations like those of kindergartens, object and picture lessons, lessons in housekeeping, and other practical matters forming an introduction to education.	Spelling.	Reading.	Writing.	Arithmetic.	English grammar.	History.	Music, vocal.	Music, instrumental.	Sewing.	Knitting.	Cooking.	Farm and garden work.	Carpentry.	Blacksmithing.	Other industries.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	California Home for the Care and Training of Feeble-Minded Children.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dumb-bells, California Gymnasium.
2	Connecticut School for Imbeciles	.....	.....	.....	16	67	42	52	0	3	33	0	21	7	.....	.....	.....	.....	.....	
3	Illinois Asylum for Feeble-Minded Children	.....	58	.....	.....	.....	.....	.....	.....	.....	32	34	40	31	.....	30	.....	.....	21	
4	Indiana School for Feeble-Minded Youth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
5	Iowa Institution for Feeble-Minded Children	150	110	260	132	91	91	70	12	.....	30	28	48	10	26	25	4	.....	.....	
6	State School for Idiotic and Imbecile Youth	30	18	.....	11	20	15	21	1	2	57	..	13	9	.....	17	.....	.....	13	
7	The Kentucky Institution for the Education and Training of Feeble-Minded Children.	18	149	149	115	124	71	50	0	22	149	12	40	0	3	10	6	.....	41	
8	Massachusetts School for the Feeble-Minded	71	89	84	43	51	49	27	.....	.....	18	.....	46	6	.....	23	4	0	34	Military, drill, dumb-bells.
9	Minnesota School for Feeble-Minded	195	58	67	118	118	96	92	51	29	54	20	69	32	.....	34	1	.....	143	Calisthenics.
10	Nebraska Institute for Feeble-Minded Youth	95	68	120	52	72	52	64	31	.....	.....	.....	16	.....	5	4	.....	.....	55	Do.
11	The New Jersey Home for the Education and Care of Feeble-Minded Children.	20	20	17	19	30	29	39	26	26	24	5	23	15	.....	8	.....	.....	37	Gymnastics.
12	New Jersey State Institution for Feeble-Minded Women.	.....	.....	.....	10	10	10	10	10	10	10	0	20	5	2	.....	.....	.....	.....	Calisthenics.
13	New York State Custodial Asylum for Feeble-Minded Women.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50	.....	.....	.....	.....	.....	.....	Do.
14	School for Feeble-Minded	28	28	28	55	40	65	77	.....	32	92	.....	24	.....	.....	25	2	.....	32	
15	New York State Asylum for Idiots	220	56	237	.....	144	115	177	.....	.....	115	18	128	8	8	31	2	1	229	
16	The Ohio Institution for Feeble-Minded Youth	.....	.....	.....	.....	581	.....	.....	.....	.....	.....	.....	12	0	6	46	2	1	104	Do.
17	Pennsylvania Training School for Feeble-Minded Children.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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TABLE 13.—*Statistics of public institutions for the feeble-minded, for 1889-90.*—PART IV.

	Name.	Volumes in library.	Value of scientific apparatus.	Value of grounds and buildings.	Receipts.		Expenditures.	
					State, county, or municipal appropriations.	Other sources.	Buildings and improvements.	For support.
	1	2	3	4	5	6	7	8
1	California Home for the Care and Training of Feeble-Minded Children	.....	.....	$45,000	$40,500	$4,519	.....	$30,374
2	Connecticut School for Imbeciles	.....	.....	.....	11,007	16,423	$1,799	25,630
3	Illinois Asylum for Feeble-Minded Children	180	.....	193,865	66,000	.....	2,785	70,025
4	Indiana School for Feeble-Minded Youth	.....	.....	280,000	75,000	1,233	.....	74,923
5	Iowa Institution for Feeble-Minded Children	.....	.....	275,000	109,609	3,305	2,460	81,069
6	State School for Idiotic and Imbecile Youth	0	$10	30,000	28,775	.....	8,919	17,520
7	The Kentucky Institution for the Education and Training of Feeble-Minded Children.	300	.....	60,000	32,000	49,600	50,000	42,000
8	Massachusetts School for the Feeble-Minded	0	0	137,000	a78,581	60,829	91,796	42,194
9	Minnesota School for Feeble-Minded	135	150	167,000	56,000	1,990	22,266	49,553
10	Nebraska Institution for Feeble-Minded Youth	0	200	86,000	36,038	.....	16,602	5,200
11	The New Jersey Home for the Education and Care of Feeble-Minded Children	.....	.....	30,000	.....	24,380	2,847	20,601
12	The New Jersey State Institution for Feeble-Minded Women	100	.....	20,000	.....	5,258	.....	5,668
13	New York State Custodial Asylum for Feeble-Minded Women	.....	.....	110,000	57,166	3,429	37,458	23,137
14	School for Feeble-Minded	.....	.....	.....	.....	.....	.....	.....
15	New York State Asylum for Idiots	335	200	355,429	102,340	12,550	33,004	88,805
16	The Ohio Institution for Feeble-Minded Youth	.....	.....	660,853	149,700	13,815	7,262	123,364
17	Pennsylvania Training School for Feeble-Minded Children *	1,000	.....	450,000	115,967	.....	.....	119,137

a Special appropriation for building purposes.

*Statistics for 1888-89.

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TABLE 14.—*Statistics of private institutions for the feeble-minded, for 1889-90.*—PART I.

	Post-office.	Name.	Year of first opening.	Superintendent or principal.	Instructors.				Pupils.					Number dismissed in 1889-90.	Total number dismissed since organization.	Percentage of those leaving school that are self-supporting.	Receipts.	Expenditures.
					Male.	Female.	In industrial department.	Assistants in caring for inmates.	Male.	Female	Present Dec. 1, 1889.	Present June 1, 1890.	In kindergarten.					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	New London, Conn.	The School for Backward and Delicate Boys.	1880	A. N. Williamson, M. D.	....	....	.....	.....	6	....	.....	.....	.....	.....	.....	.....	$4,000	.....
2	Ellicott City, Md.	The Fort Hill Private Institution for Feeble-Minded and Epileptic Children.	1886	Samuel J. Fort, M. D.	1	2	3	1	12	5	12	17	7	0	12	.....	.....	.....
3	Amherst, Mass..	Home School for Nervous and Delicate Children and Youth.	1882	Mrs. W. D. Herrick.	1	3	1	5	10	3	.....	13	.....	.....	.....	.....	.....	.....
4	Barre, Mass	Private Institution for the Education of Feeble-Minded Youth.	1848	Geo. Brown, M. D., Catherine W. Brown, G. A. Brown, M. D.	....	5	12	24	47	16	.....	.....	.....	6	.....	.....	.....	.....
5	Fayville, Mass ..	Hillside School.....	1870	Mesdames Knight and Green.	0	2	1	.....	5	5	10	10	0	0	28	1	.....	.....
6	Kalamazoo, Mich	Wilbur School and Home for the Feeble-Minded.	1884	C. T. Wilbur, M. D....	1	5	6	.....	27	12	30	30	39	9	49	0	.....	.....
7	Cranbury, N. J..	Private Home and School for the Feeble in Mind.	1889	C. F. Garrison.....	0	2	0	2	5	4	4	9	3	3	3	2	0	$3,500
8	Haddonfield, N. J.	Haddonfield Training School for Feeble-Minded.	1883	Margaret Bancroft, Jean W. Cox.	1	4	3	3	3	6	8	8	4	4	4	3	.....	.....
9	Amityville, N. Y.	Brunswick Home School	1887	S. R. Williams	0	1	0	0	18	11	28	29	0	0	.....	0	.....	.....
10	New York, N. Y. (260 W. 54th st.).	Seguin Physiological School for Children of Arrested Mental or Physical Development.	1878	Mrs. Elsie M. Seguin.	0	8	0	.....	8	7	.....	.....	.....	.....	.....	.....	.....	.....

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TABLE 14.—*Statistics of private institutions for the feeble-minded, for 1889-90.*—PART II.

	Name.	Kindergarten.			School studies.								Industrial training.							Physical training
		The cultivation of the perceptive faculties and improvement of speech.	Simple manual exercises to overcome imperfections in use of fingers, etc.	Occupations like those of kindergartens, object and picture lessons, lessons in housekeeping, and other practical matters forming an introduction to education.	Spelling.	Reading.	Writing.	Arithmetic.	English grammar.	History.	Music, vocal.	Music, instrumental.	Sewing.	Knitting.	Cooking.	Farm and garden work.	Carpentry.	Blacksmithing.	Other industries.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	The School for Backward and Delicate Boys	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	The Fort Hill Private Institute for Feeble-Minded and Epileptic Children.	.....	.....	.....	5	6	6	7	.....	.....	12	.....	5	1	.....	2	.....	.....	.....	Free gymnastics.
3	Home School for Nervous and Delicate Children and Youth.	.....	.....	.....	13	13	13	13	.....	.....	13	3	13	.....	.....	.....	.....	.....	.....	.....
4	Private Institution for the Education of Feeble-Minded Youth.	.....	.....	.....	23	62	56	52	33	43	25	15	16	13	.....	7	3	.....	12	.....
5	Hillside School	.....	.....	.....	6	6	6	4	3	3	3	2	3	2	2	2	1	.....	.....	.....
6	Wilbur School and Home for the Feeble-Minded	.....	.....	.....	39	39	39	39	39	39	39	39	39	39	39	.....	.....	0	.....	.....
7	Private Home and School for the Feeble in Mind	3	3	2	3	3	3	3	.....	.....	2	1	2	2	.....	1	.....	.....	.....	Beach's health exercise, dumbbells.
8	Haddonfield Training School for Feeble-Minded	3	5	9	4	4	4	4	4	4	4	2	6	4	2	1	2	.....	6	Calisthenics.
9	Brunswick Home School	.....	.....	.....	22	11	11	.....	.....	.....	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	Seguin Physiological School for Children of Arrested Mental or Physical Development.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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EDUCATION IN FOREIGN COUNTRIES.

The following table presents the statistics of public elementary schools, *i. e.*, schools intended for children of legal school age, generally 6 to 14 years, and supported wholly or in part by public funds. In a few instances the statistics are not strictly limited to these bounds.

For France, as will be seen by reference to columns 3 and 4, the enrollment in private elementary schools, which derive nothing from public funds, is included. As these schools are, however, under government inspection they pertain in a certain sense to the public system. For England and Wales and Scotland the enrollment includes pupils in infant schools and classes. Of the number tabulated, for the former 9 per cent. and for the latter 2.42 per cent. were under 5 years of age.

In Ireland only those pupils on the rolls who make at least one attendance in the fortnight preceding the government examination are included in the number recognized for the government payments. This number and the total enrollment for the year are both tabulated (see column 5). Private schools not aided by public funds are included in the enrollment for the Netherlands. The latest official statistics from Finland, *i. e.*, for 1889-90, give a very imperfect notion of the actual state of instruction in that country, as they include only organized schools, whereas the larger proportion of the population receive the elements of knowledge through the agency of ambulatory schools. The statistics of these as reported in 1886 are, therefore, given (see column 5).

The statistics of Upper Burmah, whose schools have recently been brought under the supervision of English officials, include 8,685 pupils in strictly private schools. For the remaining provinces of India the tabulated statistics include only public primary schools. The reports received show also an attendance in private native schools of elementary grade as follows: Bengal, 77,286; Bombay, 67,123; Lower Burmah, 35,003; North West Provinces and Oudh, 70,061; Mysore, 22,162.

Peculiar difficulties are encountered in the attempt to tabulate the current expenditures for elementary education. In some instances these are given in financial reports separate from the educational, and pertaining to a different year. Often the total expenditure for education is given without itemizing, so that the amounts devoted to the elementary schools can not be determined; thus, for example, in Russia in 1891 the school budgets of the different ministers having charge of educational institutions amounted to about $23,000,000, the proportion for elementary education not being separable.

In Roumania in 1891 the total budget for the various grades of education was $3,580,921.

The total expenditures are not made up in every case solely from public funds, governmental and local, church subsidies and tuition fees being often sources of revenue. In the German-speaking countries tuition fees form only an insignificant item in the total expenditure. In 1888 the principle of free education was established by law in Prussia, and is being carried into effect as rapidly as circumstances permit. In Belgium while subsidized private schools comprise 29 per cent of the enrolled pupils, tuition fees afford about 5.22 per cent of the total elementary school income, the maintenance of forty-nine normal schools being included therein.

About 25 per cent of the reported school expenditure for England and Wales was made up from tuition fees, which this year, for the last time, form an appreciable part of the income, the law providing for the remission of fees having gone into operation September, 1891. Scotland has completed a year's experiment in free education. Tuition fees are required in the public schools of the following British colonies represented in the table: Quebec, New South Wales, South Australia, Western Australia, Tasmania, Mauritius, Trinidad, Jamaica, and the provinces of India.

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Statistics of public elementary

	Countries.	Date of reports.	Enrollment in elementary schools.				Average attendance.		Number of teachers.		
			Boys.	Girls.	Total.	Ratio to total population.	Total.	Ratio to enrollment.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11
	Austria-Hungary.	1889	.....	.....	5,312,656	12.2	.....	90	.....	.....	.....
1	Austria.	1889	.....	.....	3,132,088	13.1	.....	90	45,705	14,421	60,126
2	Hungary.	1889	.....	.....	2,180,568	12.6	.....	90	21,356	3,289	24,645
3	Belgium	1889	334,556	280,115	614,671	10	.....	.....	.....	.....	11,550
4	Bulgaria	1890	129,777	42,206	171,983	5.45	.....	.....	.....	.....	.....
5	Denmark	.....	.....	.....	231,940	10.61	.....	.....	.....	.....	.....
6	France	1889	c2,462,671 d373,721 2,836,392	c1,987,680) d302,829 2,790,509)	5,626,901	14.7	.....	.....	c55,987 d9,194 65,181	c44,926) d32,553) 77,479)	142,660
7	Germany	1890	.....	.....	9,300,000	18.8	.....	95	.....	.....	.....
8	Baden	1889	.....	.....	342,764	20.6	.....	95	.....	.....	5,408
9	Bavaria	1890	.....	.....	1,187,792	21.2	.....	95	19,387	5,543	23,924
10	Bremen	1890	.....	.....	32,191	18	.....	95	.....	.....	584
11	Hamburg	1890	.....	.....	96,356	15.6	.....	95	.....	.....	1,669
12	Lübeck	1890	.....	.....	13,331	18	.....	95	.....	.....	239
13	Prussia	1890	.....	.....	5,874,390	19.6	.....	95	70,144	9,556	79,700
14	Saxony	1889	.....	.....	706,946	20.2	.....	95	7,696	2,406	10,102
15	Würtemberg.	1889	.....	.....	388,262	19	.....	95	.....	.....	4,609
16	Great Britain: England and Wales.	1889-90	.....	.....	4,825,560	16.6	3,732,327	77.34	31,214	66,719	97,933
17	Scotland	1889-90	.....	.....	664,466	16.4	512,690	77.15	4,841	8,207	13,048
18	Ireland	1890	.....	.....	h694,832 i1037102	h14.76) i22.03)	489,144	h70.39	7,453	9,486	16,939
19	Greece	1884-85	.....	.....	118,480	5.41	.....	.....	.....	.....	.....
20	Italy	1888-89	1,166,614	977,947	2,144,561	7.01	.....	.....	20,523	28,041	48,564
21	Netherlands	1889	334,445	308,533	642,978	14.25	.....	.....	.....	.....	15,192
22	Norway	1888	.....	.....	295,239	14.07	.....	.....	.....	.....	.....
23	Portugal	1887	.....	.....	179,069	3.27	.....	.....	.....	.....	.....
24	Roumania	1890-91	.....	.....	130,000	2.34	.....	.....	.....	.....	2,584
25	Russia	1887	(408,721) 1,451,609	383,236	2,243,566	1.08	.....	.....	.....	.....	.....
26	Finland	1889-90	37,558	32,181	69,739 f152,376	3.02 f9.63	39,898	57.35	654	731	1,385

a From state only, including secondary schools.
b For 1888.
c Public schools.
d Private schools.
e In 1887.
f For 1888-89.

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education in foreign countries.

Current expenditures.					Population.	Date of census.	Name and title of chief officer of education.	
Salaries.	Incidentals.	Total.	Per capita of enrollment.	Per capita of population.				
12	13	14	15	16	17	18	19	
					41,231,342	1890		
				a80.22	23,895,413	1890	Dr. Paul Gautsch v. Frankenthurn, minister of public instruction and ecclesiastical affairs.	1
$4,057,883	$1,338,896	$5,396,779	$2.48	.42	17,335,929	1890	Count Albin Csaky, minister of public worship and instruction.	2
		b5,465,709	b8.89	.89	6,147,041	1890	M. J. de Burlet, minister of the interior and of instruction.	3
					3,154,375	1888	G. Jivkow, minister of public instruction.	4
					2,185,159	1890	A. H. Goos, minister of ecclesiastical affairs and public instruction.	5
21,014,587		b30,763,541	6.91	.80	38,343,192	1891	M. Léon Bourgeois, minister of public instruction and fine arts.	6
					49,428,470	1890		7
					1,657,867	1890	Dr. H. Nokk, minister of justice, worship, and instruction.	8
3,898,589	1,564,390	5,462,979	4.60	1	5,594,982	1890	Dr. L. A. von Müller, minister of public instruction.	9
		260,700	8.40	1.94	180,443	1890	Dr. A. Pauli, senator, chief school council.	10
			e11.74	1.36	622,530	1890	Dr. J. O. Stammann, senator, chief school council.	11
84,240	53,275	137,515	10.31	2.17	76,435	1890	Dr. W. H. Brehmer, senator, chief school council.	12
f25,492,737	f13,728,013	f39,225,750	6.56	1.86	29,959,367	1890	Dr. Bosse, minister of public worship, instruction, and medical affairs.	13
f3,292,974	f1,419,974	f4,715,906	6.66	2.28	3,502,634	1890	Paul V. Seydewitz, minister of worship and instruction.	14
g1,400,964			g3.61	1.67	3,036,522	1890	Dr. von Sarwey, minister of public worship and instruction.	15
29,505,925	8,328,895	37,834,820	7.84	1.30	29,001,018	1891	Committee of council on education: Lord president for England and Scotland, Viscount Cranbrook; vice-president for England, Sir W. Hart-Dyke; vice-president for Scotland, Marquess Lothian.	16
4,522,585	1,112,700	5,635,285	8.48	1.40	4,033,105	1891		17
		4,965,113	h7.14	1.05	4,706,162	1891	Commissioners of national education in Ireland.	18
		564,525	4.76	.25	2,187,208	1889	M. Cassonakos, minister of public instruction.	19
		13,941,753	6.02	.46	30,158,408	1890	Signor Martini (successor to Dr. Villari), minister of public instruction.	20
3,391,220		4,598,279	7.15	1.01	4,511,415	1889	Dr. H. J. Dijkmeester, minister of the interior.	21
		1,297,982	4.39	.64	1,999,176	1891	V. A. Wexelsen, minister of ecclesiastical affairs and public instruction.	22
		1,190,465	6.08	.23	4,708,178	1881	La Vaz de Sampaio e Mello, minister of the interior.	23
					5,500,000	1887	Tasche Jonescu, minister of ecclesiastical affairs and public instruction.	24
					114,873,008	1887	M. Delyanoff, minister of public instruction.	25
		282,590	4.05	.12	2,305,916	1888	Dr. L. Lindeloef, superior director of schools.	26

g Date incomplete.
h Pupils making the required number of attendances for Government payment.
i Total enrollment.
j Pupils in ambulatory schools in 1886.

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Statistics of public elementary education

	Countries.	Date of reports.	Enrollment in elementary schools.				Average attendance.		Number of teachers.		
			Boys.	Girls.	Total.	Ratio to total population.	Total.	Ratio to enrollment.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11
27	Servia	1888-89			52,358	2.42					1,136
28	Spain	1885	886,850	665,584	1,552,434	8.44	1,057,277	68.10			25,271
29	Sweden	1889			690,253	14.43					13,286
30	Switzerland	1890	293,192	258,777	551,969	19		95	7,712	3,459	11,171
	British India	1890	2,351,295	226,836	2,578,131	1.17					
31	Bengal	1888-89			1,150,327	3.03					
32	Bombay Presidency.	1889-90			477,017	2.53					
33	Burmah (upper).	1888-89			14,183	.47					
34	Burmah (lower).	1889-90			94,004	2.05					
35	NW. Provinces and Oudh.	1888-89			224,634	.65					
36	Mysore	1889-90	39,924	3,337	43,261	.88					
37	Japan	1890	2,148,466	889,566	3,038,032	7.57	2,198,610	72.37	62,865	3,600	66,465
38	Cape of Good Hope.	1890			99,523	6.52	53,978	54.23	989	1,105	2,094
39	Egypt	1887			a200,000	2.90					7,784
	Canada:										
40	British Columbia.	1889-90	4,120	3,913	8,042	8.22	4,334	53.89	77	89	166
41	New Brunswick.	1890			68,523	21.32	32,542	47.49			
42	Nova Scotia	1890	44,047	44,123	88,170	19.57	50,915	49.14	558	1,729	2,287
43	Ontario	1889	263,047	237,678	500,815	23.7	253,943	51	2,774	5,193	7,967
44	Quebec	1889-90			230,580	15.49	202,360	87.76			8,808
45	Newfoundland.	1890			31,822	16.47					
46	Mexico	1888	398,142	150,835	543,977	4.77					
47	Jamaica	1891			80,199	12.54	4,410	55.4			829
48	Trinidad	1889			17,824	8.32	12,215	70.5			
49	Cuba	1889-90			30,994	2.01					
50	Costa Rica	1890-91			12,618	5.28					
51	Guatemala	1891	33,793	16,800	5,083	3.42			907	613	1,520
52	Nicaragua	1885-86			13,660	4.90					213
53	Salvador	1888			27,700	4.25					
54	Argentine Republic.	1891	110,449	104,463	204,912	5.99			2,328	3,282	5,610
55	Bolivia	1890	17,404	6,840	24,244	1.50					849
56	Brazil	1888-89			207,973	1.48					

a Includes schools established by the Government and also those maintained by the foreign population.

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in foreign countries—Continued.

Current expenditures.					Population.	Date of census.	Name and title of chief officer fo education.	
Salaries.	Incidentals.	Total.	Per capita of enrollment.	Per capita of population.				
12	13	14	15	16	17	18	19	
					2,162,759	1891	A. Nikolitch, minister of ecclesiastical affairs and public instruction.	27
$3,614,156	$1,295,325	$4,909,481	$3.16	$ .28	17,550,246	1887	A. Linares Rivas, minister of agriculture, commerce, and public instruction.	28
		3,553,972	5.14	.72	4,784,675	1890	M. Gilljam, minister of ecclesiastical affairs and public instruction.	29
		4,603,125	8.35	2.03	2,917,754	1888		30
					220,529,100	1891		
		733,140	.68	.02	38,114,280	1891		31
		821,376	1.72	.04	18,823,820	1891	K. M. Chatfield, director of public instruction.	32
		7,013	.49	.00½	2,984,720	1891		33
		88,950	.91	.017	4,569,080	1891	John Vansomeren Pope, director of public instruction.	34
		612,587	2.72	.018	34,278,280	1891	E. White, director of public instruction.	35
		52,397	1.21	.01	4,914,110	1891	H. J. Bhabha, secretary education department.	36
		7,355,006	2.42	.18	40,072,020	1887	Count Oki Takato, minister of public instruction.	37
		1,098,962	11.04	.71	1,527,221	1891	Langham Dale, superintendent-general of education.	38
					6,817,265	1882	Aly Pacha Monborek, minister of public instruction.	39
107,574	15,410	122,985	15.29	1.33	92,767	1891	Hon. S. D. Pope, superintendent of education.	40
		395,084	5.35	1.13	321,294	1891	Hon. William Crockett, chief superintendent of education.	41
		644,861	7.42	1.43	450,523	1891	Hon. David Allison, superintendent of education.	42
2,553,815	815,620	3,369,465	6.72	1.59	2,112,989	1891	Hon. George W. Ross, minister of education.	43
					1,488,589	1891	Hon. Gideon Ouimet, superintendent of public instruction.	44
					193,124	1891	Hon. Jas. J. Wickham, superintendent of Roman Catholic schools. Hon. George S. Milligan, superintendent of Methodist schools.	45
		2,779,130	5.10	.24	11,395,712	1890	J. Baranda and J. Garcia Peña, ministers of justice and public instruction.	46
		160,034	2.17	.26	639,491	1891	Hon. Thos. Capper, inspector of schools.	47
		117,496	6.78	.56	208,030	1890	Hon. R. Lechmere Guppy, inspector of schools.	48
		553,335	17.85	.35	1,538,133			49
		131,272	10.40	.54	238,782	1891	Dr. P. L. Paez, minister of foreign affairs, ecclesiastical affairs, public instruction, charities, and justice.	50
		534,144	10.53	.36	1,452,003	1890	F. Aguilar, secretary in charge of public instruction and finance.	51
					282,845	1889	B. Guerra, minister of foreign affairs and public instruction.	52
					651,130	1886	Dr. De Castro, minister of public instruction and charities.	53
		610,052,030	48.85	2.44	4,086,492	1887	Dr. J. Caballido, minister of justice, ecclesicastical affairs, and public instruction.	54
					2,300,000	1888		55
					14,002,335	1888	A. L. A. de Carvalho, minister of public instruction, posts, and telegraphs.	56

b Appropriation by the Government and the provinces.

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Statistics of public elementary education

	Countries.	Date of reports.	Enrollment in elementary schools.				Average attendance.		Number of teachers		
			Boys.	Girls.	Total.	Ratio to total population.	Total.	Ratio to enrollment.	Male.	Female.	Total.
	1	2	3	4	5	6	7	8	9	10	11
58	Chile	1889	.....	.....	92,874	3.28	64,513	69.46	.....	.....	.....
59	Colombia	1887-88	46,108	27,092	73,200	1.87	.....	.....	.....	.....	.....
60	Ecuador	1890	.....	.....	52,830	4.07	.....	.....	.....	.....	1,15
61	Paraguay	1890	10,057	5,512	15,559	4.71	.....	.....	.....	.....	40
62	Peru	1889-90	.....	.....	53,276	1.97	.....	.....	552	258	81
63	Uruguay	1889	18,038	14,688	32,726	4.78	.....	.....	240	492	72
64	Venezuela	1890	.....	.....	100,026	4.37	.....	.....	.....	.....	.....
65	Hawaii	1890	5,532	4,474	10,006	11.11	.....	.....	193	173	36
66	Mauritius	1890	.....	.....	15,743	21.53	9,636	61.20	.....	.....	.....
67	New South Wales.	1890	.....	.....	195,241	17.21	116,665	59.75	2,082	2,099	4,18
68	Queensland	1890	34,128	30,435	64,563	16.42	40,836	66.26	694	804	1,49
69	South Australia.	1890	.....	.....	44,804	a14.22	27,552	64.16	395	672	1,06
70	Victoria	1890-91	.....	.....	247,223	21.84	132,814	53.72	1,845	2,863	4,70
71	West Australia.	1890	.....	.....	5,014	10.07	3,818	76.14	.....	.....	17
72	New Zealand	1890	60,851	57,061	117,912	18.81	94,632	80.	1,301	1,677	2,97
73	Tasmania	1889	.....	.....	17,949	12.21	8,973	50.10	143	71	21

a In the Commissioner's Report for 1888-89 by a clerical error the corresponding ratio was given as 58.81 instead of 15.92. The basis employed was the population of 1881, the latest then attainable.

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in foreign countries—Continued.

Current expenditures.					Population.	Date of census.	Name and title of chief officer of education.	
Salaries.	Incidentals.	Total.	Per capita of enrollment.	Per capita of population.				
12	13	14	15	16	17	18	19	
.....	.....	.....	.....	.....	2,766,747	1891	Señor Errazuriz, minister of justice and public instruction.	58
.....	.....	$668,725	$9.13	$0.17	3,878,600	1881	J. J. Trujillo, minister of public instruction.	59
.....	.....	176,325	3.33	.13	1,271,861	.....	Dr. E. Laso, minister of public instruction.	60
.....	.....	226,523	14.55	.68	329,645	1887	Dr. F. Insfrau, minister of justice, ecclesiastical affairs, and public instruction.	61
.....	.....	303,581	5.70	.11	2,700,945	1876	D. F. Herrera, minister of the interior.	62
.....	.....	575,039	17.57	.84	683,943	1889	Dr. C. Berra, minister of justice, ecclesiastical affairs, and public instruction.	63
.....	.....	363,050	36.29	.15	2,285,054	1890	Dr. E. Blanco, minister of public instruction.	64
.....	.....	195,719	19.56	2.17	89,990	1890	Hon. C. R. Bishop, president of the board of education.	65
.....	.....	73,114	4.63	.19	377,986	1891	Hon. A. Standley, acting superintendent of schools.	66
.....	.....	2,769,094	14.18	2.44	1,134,207	1891	Hon. J. H. Carruthers, minister of public instruction.	67
.....	.....	876,360	13.57	2.20	393,718	1891	Hon. W. O. Hodgkinson, secretary for public instruction.	68
.....	.....	453,529	10.12	1.44	315,048	1891	Hon. J. G. Jenkins, minister of education.	69
.....	.....	3,616,419	14.62	3.10	1,131,690	1891	Hon. Charles Henry Pearson, minister of education.	70
.....	.....	.....	.....	.....	49,782	1891	Hon. Owen P. Stables, secretary of central board of education.	71
.....	.....	.....	14.86	2.79	626,830	1891	Hon. W. P. Reeves, minister of education.	72
.....	.....	165,340	9.23	1.12	146,667	1891	Hon. B. Stafford Bird, minister of education.	73

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